returns (less the risk-free rate) being explained by the non-XRP cryptocurrency factors and no remaining average 'excess' XRP price returns that are unexplained by the model." (*Id.*)

Again, Ferrell cites nothing in support of his novel proposition that he can conclude, from his observation of statistically insignificant "alpha," that there are no other price-moving factors (like Ripple's actions) that might impact XRP returns. (*Id.*) Indeed, Ferrell conceded that this statistical measure cannot be used to draw such a conclusion. (*See* Ferrell Tr. 222:19-23 ("Q. Professor, are you offering the opinion that because alpha is statistically insignificant, there is no room for any other factors to explain the price returns of XRP? A. Well, no, I'm not saying that.").)

The flaws in Ferrell's methodology become obvious in the numerical results of his analysis. Ferrell's factor model looks at two separate periods. For the first period, spanning the entire period at issue in this case (2013-2020), Ferrell's model admittedly explains only approximately 54% of XRP's price fluctuations. (*See* Ferrell Tr. 178:18-22.) Ferrell did not analyze whether Ripple's statements or actions were responsible for the remaining 46% of XRP's price changes. For the second period, which starts in mid-2015, Ferrell claims his model explains approximately 92% of XRP's price fluctuations. Ferrell was unable, however, to explain why his two models have such dramatically different explanatory power. (Ferrell Tr. 173:24-176:3.) *See In re LIBOR-Based Fin. Instruments Antitrust Litig.*, 299 F. Supp. 3d at 468 ("[I]nconsistent results are an 'indicia of unreliability' in an expert's methodologies. This principle is clearest in the context of inconsistent results produced by the same methodology." (citation omitted)); *Malletier*, 525 F. Supp. 2d at 569 (excluding expert opinion because of "unexplained inconsistency between the results" produced by two iterations of the same methodology).

In addition, Ferrell's own analysis conveys that the magnitude of the *typical* monthly XRP price return left unexplained by his factor model was approximately 53.2% for his first period and approximately 34.2% for his second period. (*See* Ferrell Tr. 241:8-243:19.) Far from supporting

Ferrell's conclusion that "the variation in long-run XRP price return can be explained by non-XRP cryptocurrency market factors that are outside of Ripple's control" (Ferrell Report ¶ 103), Ferrell's own model demonstrates that there is significant room in Ferrell's results for Ripple's actions to affect XRP price returns—a relationship that Ferrell generally elected not to study.

b.   Ferrell's Opinion Regarding Ripple's Distribution of XRP and XRP Price Is Irrelevant and Unreliable.

Ferrell's conclusion that Ripple's distributions of XRP, alone, did not increase XRP's prices (Ferrell Report ¶¶ 107-23) is legally irrelevant. *Howey* focuses on *expectations* created by the totality of the promoter's statements and representations. *See Joiner*, 320 U.S. at 352-53 (courts look to "the terms of the offer, the plan of distribution, and the economic inducements *held out* to the prospect" (emphasis added)). To be sure, a promoter's actual efforts or economic inducements, both before and after the sale, may inform a court's examination of the parties' reasonable expectations. *See SEC v. Merchant Cap., LLC*, 483 F.3d 747, 756-57 (11th Cir. 2007). But there is no case applying *Howey* where a court looks to the relationship between the act of selling the instrument at issue and changes to its price to determine whether any *Howey* prong was satisfied.

Moreover, Ferrell's conclusion is unreliable as a result of his methodological choices for three reasons. *See Showers v. Pfizer, Inc.*, 819 F.3d 642, 665 (2d Cir. 2016) ("If an opinion is based on 'a methodology' that is 'simply inadequate to support the conclusions reached, *Daubert* and Rule 702 mandate the exclusion of that unreliable opinion testimony.'" (citation omitted)).

First, Ripple's distributions of XRP could only impact XRP's price if (a) such XRP actually entered the market, or at least (b) market participants were aware of Ripple's distributions. But Ferrell did not examine whether either of these occurred. (*See* Ferrell Tr. 247:8-14, 249:9-15.)

Second, Ferrell's model, constructed on a 28-day period basis, cannot distinguish between a 28-day period in which Ripple made no XRP distributions, and an equivalent period when Ripple bought and sold an identical amount of XRP. (*See id.* at 251:15-252:21.) This flaw is critical because,

if Ripple bought XRP to increase XRP's price in response to a price decline at the beginning of the period, and the price rebounded in response to Ripple's actions, Ferrell's model would not detect this relationship. (*See id.*) To do so, Ferrell would have had to use daily XRP trading data, which he had access to but elected not to analyze. (*See id.* at 321:3-11.)

Third, Ferrell converted his original data—the number of XRP distributed by Ripple—into a dollar value, using the market price of XRP. (Ferrell Report at Ex. 8.) This conversion was wholly unnecessary, and Ferrell could not identify any academic literature that uses the dollar value of net distributions to measure the impact of distributions on an asset's price. (*See* Ferrell Tr. 257:21-258:1-3.) Ferrell's conversion was also methodologically unsound because it introduced additional variation into his distributions data (XRP price variation), and by introducing this additional variation, Ferrell artificially diluted correlation between Ripple's distributions and XRP returns.

In sum, Ferrell proposes to opine about a relationship (between Ripple's distributions of XRP and its price) that is irrelevant under *Howey*, and then compounds this error by not analyzing the relationship he purports to study (and instead focusing on the relationship between other digital assets and XRP). This does not comport with basic *Daubert* principles and should be excluded.

2. Ferrell's Opinion that XRP Is a Virtual Currency Is Irrelevant.

The federal securities laws' definition of "securities" exclude "currency." 15 U.S.C. 78c(a)(10). Defendants appear to argue that because XRP is a "virtual currency," it is not a security under the Securities Act. *See* D.E. 51 (Ripple Am. Answer, Fourth Aff. Defense); D.E. 462 (Garlinghouse Answer, Sixth Aff. Defense); D.E. 463 (Larsen Answer, Seventh Aff. Defense). In an apparent attempt to buttress this legal argument, Defendants offer Ferrell's opinion that XRP is "properly viewed as a virtual currency" (Ferrell Report ¶ 15), because it purportedly has three features associated with currencies—medium of exchange, a store of value, and unit of account (*id.* ¶¶ 148-52). Importantly, Ferrell concedes that XRP is not "real" or "fiat" currency. (*Id.* ¶ 146.) In

any event, Ferrell's opinion that XRP is a virtual currency is a legally irrelevant conclusion that should be excluded.

"Virtual currencies" such as XRP are not "currencies" under the federal securities laws. Although these statutes do not define "currency," the plain English understanding of that word at the time the statutes were written was legal tender, *i.e.*, "the circulating monetary medium of a nation." The Modern Webster Dictionary 112 (1933 Ed.). Consistent with this understanding, federal regulations to this day define "currency" as the "coin and paper money of the United States or of any other country that is designated as legal tender and that circulates and is customarily used and accepted as a medium of exchange in the country of issuance." 31 C.F.R. 1010.100(m). Thus, FinCEN concluded in 2013 that "'virtual' currency … does not have all the attributes of real currency" mostly because it "does not have legal tender status in any jurisdiction." Guidance: Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies (Mar. 18, 2013) (discussing 31 C.F.R 1010.100(m)).[13] Because Ferrell concedes that XRP is not fiat or "real" currency (Ferrell Report ¶ 146), his entire "currency" opinion is irrelevant.

---

[13] Like FinCEN, the SEC and the IRS (the agency upon whose views Easton relies, *see supra* at Argument Section IV), have both stated for nearly a decade that "virtual currency" is not "real currency." *In re BTC Trading Corp.*, SEC Rel. No. 9685, 2014 WL 6872955, at *1 n.1 (Dec. 8, 2014); I.R.S. Notice 2014-21, 2014-16 I.R.B. 938 (Apr. 14, 2014). Accordingly, the line of legal authorities noting that simply because something may be labeled a "virtual currency" says nothing about whether it is also a "security" has continued unbroken and includes President Biden's crypto asset Executive Order earlier this year. *See, e.g.*, Exec. Order No. 14067 of Mar. 9, 2022 § 9(d), 87 Fed. Reg. 14143 (Mar. 14, 2022), *available at* https://www.whitehouse.gov/briefing-room/presidential-actions/2022/03/09/executive-order-on-ensuring-responsible-development-of-digital-assets/ ("[D]igital assets include cryptocurrencies, stablecoins, and [central bank digital currencies]. Regardless of the label used, a digital asset may be, among other things, a security, a commodity, a derivative, or other financial product."); *see also Requirements for Certain Transactions Involving Convertible Virtual Currency or Digital Assets*, 86 FR 3897-01, 2021 WL 136609, at n.4 (Jan. 15, 2021) (FinCEN noting that when it proposes requirements for Money Services Businesses relating to "virtual currency," "nothing" it says about whether virtual currencies are subject to its Money Services Business requirements is intended to constitute a determination that "any" virtual currency "is currency for purposes of the federal securities laws").

Moreover, simply stating that something is a "currency" or a "virtual currency" does not advance the *Howey* analysis. *See Zaslavskiy*, 2018 WL 4346339, at *7 ("[S]imply labeling an investment opportunity as 'virtual currency' or 'cryptocurrency' does not transform an investment contract … into a currency.") (quoting *Edwards*, 540 U.S. at 393). Even if XRP were a virtual currency, Ferrell does not take the position that it is impossible for a virtual currency to be offered and sold as an investment contract. (*See* Ferrell Tr. 331:13-20.) Indeed, several courts have concluded that "virtual currencies" were sold, were likely sold, or could be sold as securities, and no court has concluded otherwise. *See Zaslavskiy*, 2018 WL 4346339, at *7-8; *Telegram*, 448 F. Supp. 3d at 379-80; *Kik*, 492 F. Supp. 3d at 175-76; *Solis v. Latium Network, Inc.*, No. 18 Civ. 10255, 2018 WL 6445543 (D.N.J. Dec. 10, 2018); *Balestra v. ATBCOIN LLC*, 380 F. Supp. 3d 340, 357 (S.D.N.Y. 2019)).

3.   Ferrell's Opinion that ODL "Uses" XRP Is Irrelevant.

Ferrell opines that ODL "uses" XRP as a medium of exchange and that Ripple's subsidizing of ODL customers is consistent with general business practices. (Ferrell Report ¶¶ 153-66.) Like his "currency" opinion, Ferrell's "use" opinions are irrelevant and should be excluded. As discussed above, Argument Section II.C.4, whether XRP has "use" in connection with ODL is irrelevant to whether Ripple *sold* XRP for "use," or whether it sold it as an investment contract. *See Fedance*, 1 F.4th at 1288-89; *Aldrich*, 627 F.2d at 1039-40.

In addition, Ferrell's opinion regarding XRP's "use" in ODL is not the product of meaningful analysis but largely consists of a recitation of record facts, sometimes in summary form. (*See, e.g.*, Ferrell Report ¶¶ 155-60 & Exs. 17-20 (summarizing MoneyGram's XRP transfers related to ODL, relying on voluminous MoneyGram transaction data); *id.* ¶ 162 (reciting the various incentives and bonuses Ripple paid MoneyGram to transact in XRP).) Experts are not summary witnesses, and it is "inappropriate for experts to act as a vehicle to present a factual narrative of

interesting or useful documents for a case, in effect simply accumulating and putting together one party's 'story.'" *Scentsational Techs.*, 2018 WL 1889763, at *4.[14]

E.   Ferrell's Additional Opinions Should Be Excluded.

The remaining of Ferrell's opinions, mostly set forth his Rebuttal and Supplemental Reports, should also be excluded.

First, the portions of Ferrell's Supplemental Rebuttal that constitute improper attempts to bolster the original opinions in his Report should be excluded. This includes: his description of a statistical analysis he performed prior to submitting his Report but elected not to disclose in that Report (Ferrell Supp. Report ¶ 19; Ferrell Tr. 33:24-34:6); his response to Dr. ▮▮▮ rebuttal to his Report (Ferrell Supp. Report ¶ 3 n.5); and a citation to an academic article he omitted from his Report and which accordingly could not be explored at deposition (*id.* ¶ 18 n.26).[15] *See, e.g., Pride v. BIC Corp.*, 218 F.3d 566, 578-79 (6th Cir. 2000) (affirming trial court's exclusion of rebuttal report that was a "transparent attempt" to redress weaknesses identified in the witness's opening report); *Liddle v. Cirrus Design Corp.*, 2009 WL 4907201, at *4-5 (S.D.N.Y. Dec. 18, 2009) (excluding rebuttal

---

[14] Ferrell's opinions regarding "Ripple's efforts to facilitate the growth of XRP market liquidity" (Ferrell Report ¶¶ 124-39) suffer from the same flaws. Ferrell merely recites Defendants' own "story" of Ripple's efforts to build XRP market liquidity. (*See id.*) Although portions of this section of his Report seem to provide an opinion regarding Ripple's purpose or intent underlying its efforts to increase XRP's liquidity (*e.g., id.* ¶¶ 108, 112), Ferrell disclaimed any such meaning (*see* Ferrell Tr. 263:15-20).

[15] Even this article does not support Ferrell. The authors examine the concept of "alpha" in a dissimilar context, evaluating the price effects of corporate governance policies instituted at a distinct point in time and which largely remained unchanged during the considered period. In contrast, Ferrell contends here that his "alpha" measurement can be used to exclude the possibility that discrete Ripple actions spanning a seven-year period cannot have affected XRP's price. The authors also endorse the use of event studies, as ▮▮▮ conducted here—and not the examination of "alpha" that Ferrell embraces—to determine whether there is a quick market reaction to a given news event. *See* Paul A. Gompers, et al., "Corporate Governance and Equity Prices," The Quarterly Journal of Economics (2003) at 107-55 (Ex. 27).

report that did not properly address opposing expert's report, and instead "rehashe[d] the conclusions" from an opening report).

Second, Ferrell's contentions about ███████ findings should be excluded as beyond the scope of ████ opinion. A rebuttal expert opinion must "contradict or rebut evidence on the same subject matter of the other party's expert report." *Rekor*, 2022 WL 2063857, at *7-9 (citation omitted). Ferrell argues that ██████ findings do not establish "any long-term sustained effect" on the price of XRP and, "[a]ccordingly, … provides no support for a conclusion that purchasers of XRP had a reasonable expectation of obtaining profits from the efforts of Ripple." (Ferrell Rebuttal Report ¶¶ 11, 14.) But ██████ did not undertake to examine whether Defendants' trading efforts created long-term effects, instead focusing largely on the short-term effects of Defendants' trading on XRP's price. (*See* ██████ Report ¶ 9 (summarizing opinions, including "[a]t specific times, Ripple and its executives directed GSR, a digital asset trading and market making firm, to buy XRP in a manner consistent with i) pushing prices upward or ii) providing a price floor to stabilize and keep prices from falling").) Similarly, as Ferrell acknowledged, ██████ did not opine on the reasonable expectations of XRP purchasers. (*See* Ferrell Tr. 305:23-306:5.) Accordingly, Ferrell's rebuttal opinion that go beyond topics addressed by ██████ should be excluded.

Third, Ferrell's critiques of ██████ conclusions are all scientifically unsound. Ferrell criticizes ██████ event study methodology for incorporating into its but-for price analysis XRP's price "days that ██████ himself has identified as non-news days." (Ferrell Supp. Report ¶¶ 9-13, Ex. 1.) Ferrell thus suggests that ██████ should not have taken into account the compounding effect of the change in XRP's price, but cites no academic or professional studies suggesting this is an incorrect approach. In fact, this is the standard method of constructing counterfactual prices, and is precisely the methodology used by Defendants' expert Marais in his expert report (*see* Marais Rebuttal Report ¶¶ 27-29 & Table 3), and by Ferrell himself in another context. *See* Allen Ferrell & Atanu Saha,

"The Loss Causation Requirement for Rule 10b-5 Causes of Action: The Implication of *Dura Pharmaceuticals, Inc. v. Broudo*," The Business Lawyer, Vol. 63, No. 1 (November 2007), pp. 163-86 (Ex. 28) (in constructing counterfactual prices but-for certain events, the price change on event days is incorporated into the asset's price going forward in subsequent, non-event days).

Ferrell also misreads ▮▮▮ report in multiple ways, including when Ferrell notes that ▮▮▮ residual returns in his market model are "alpha," (they are "epsilon") (*compare* Ferrell Supp. Report at 3 *with* Supp. Report ¶¶ 10-12), and when he incorrectly states that ▮▮▮ is "silent on the issue of market efficiency" (Ferrell Supp. Report ¶ 5), which he is not (▮▮▮ Report ¶ 35 & Appendix F). Indeed, Ferrell's own factor analysis is subject to the same market efficiency constraints, and in any event, he testified that it is not impossible to perform an event study when the market is not efficient. (*See* Ferrell Tr. 70:8-12.) *See Berk v. St. Vincent's Hosp. & Med. Ctr.*, 380 F. Supp. 2d 334, 353 (S.D.N.Y. 2005) (expert testimony premised on "incorrect factual assumptions" must be excluded (citation omitted)); *see also Chen-Oster*, 2022 WL 814074, at *6 (excluding portions of expert testimony based on flawed methodology).

VII.   Osler's Initial Opinions Should Be Excluded in Their Entirety.

Osler has offered a number of opinions in her initial expert report regarding whether XRP has the functions and attributes of a currency, and whether Ripple's ODL product was an "economically sound option" for "cross-border and cross-currency payments." The Court should exclude each of these opinions because they do not meet the requirements of Rule 702.

A.   Osler's Background

1. Osler's Education, Training and Experience

Osler is a professor at the International Business School of Brandeis University. (Osler Report (Ex. 29) Ex. A at 1.) Her teaching and research focuses primarily on currency markets and exchange rates. (*Id.* ¶ 4.) Osler previously served as an expert in several other cases involving

foreign currency issues. (*See id.* at Ex. A, at 1-2.) However, she has no special expertise in cryptocurrencies. Osler has never taught a class or published an academic paper on the subject of cryptocurrencies. (*Id.* at Ex. A at 1-4; *see also* Osler Tr. (Ex. 30) 20:19-24:9.) Her most significant professional experience involving cryptocurrency was a single, unpublished article she coauthored with one of her former students. (*See* Osler Tr. 23:23-24:22.)

2.   Osler's Initial Report

Osler's expert report offers two main opinions. First, Osler opines that XRP fits the economic definition of a "currency" because it has the functions and attributes commonly assigned to currencies. (Osler Report ¶¶ 7, 8-18.) However, Osler never defines the term "currency" in her report, and was unwilling to do so in her deposition testimony. (*Id.* ¶¶ 6-8; Osler Tr. 68:3-73:23 ("I address the functions of a currency. I do not provide a definition.").) Indeed, Osler does not claim that XRP could be considered a "currency" as that term is defined in the federal securities laws, in Treasury regulations, or elsewhere. Nor does she contend that XRP is the legal tender, or an officially-accepted a medium of exchange, in any country.

Instead, she finds that XRP functions as a currency, as a medium of exchange, a means of payment, a unit of account and a store of value, and that XRP is durable, portable, divisible, uniform, acceptable in trade, limited in supply, and inexpensive to store. (Osler Report ¶¶ 7, 13-14, 18.) However, Osler reaches those conclusions without reviewing any studies, academic articles or other publications considering the question of whether XRP or other digital assets function like a currency. (Osler Tr. 63:17-64:6.) And she makes no attempt to quantify how well, or how poorly, XRP functioned as a store of value or a unit of account. (*Id.* at 182:17-25.)

Second, Osler opines that ODL, which relies on the XRP Ledger and XRP as a bridge currency, was an "economically sound option" for "cross-border and cross-currency payments." (Osler Report ¶¶ 7, 19-74.) She also claims that ODL, the XRP Ledger, and XRP, are faster, less

costly, and more transparent than traditional payments platforms; that they require fewer resources to operate than other cryptocurrency ledger systems; that they constitute a solution to challenges in computer science; that XRP addresses the problems posed by the multiplicity of connections among currencies; that the dominant payment platforms have no incentivizes to incorporate digital technologies; that Ripple's challenges as a start-up business include "network externalities" which benefit dominant firms and create barriers to entry; and that by promoting ODL Ripple is employing a strategy known as "disruptive innovation." (*Id.*)

However, Osler never tested the speed of an ODL transaction; she simply accepted Ripple's own descriptions of the speed of its ODL product. (*Id.* ¶¶ 54 n.78; 44 n.68; Osler Tr. 200:16-19; 203:2-24; 212:16-13:2.) In fact, her understanding of how XRP's environmental impact and use of computing power compares to bitcoin, and how the XRP Ledger actually functions, is derived from materials authored or produced by Ripple. (Osler Report ¶ 54 n.80; Osler Tr. 232:14-235:16.) Osler even concedes that her understanding of ODL would not be any better than another person who read the same materials. (Osler Tr. 236:21-237:15.)

Osler concludes her initial report by endorsing Ripple's reliance on XRP for its ODL product as a "vehicle" for real-time settlement of foreign exchange transactions. (*See* Osler Report ¶¶ 58-64.) She asserts, based on her knowledge of "[e]conomic theory," that Ripple's use of digital assets in foreign currency exchange constitutes a "wise[]" strategy of "disruptive innovation" focusing on "small" and "new" segments of the payments industry.[16] (*Id.* at ¶¶ 65, 74.) Osler notes that this strategy is "challenging," and requires Ripple to develop a "network" of clients, but asserts that ODL may ultimately prove successful—even if ODL is now losing money. (*Id.* ¶¶ 69-74.)

---

[16] Osler does not claim to have any special knowledge, training or experience in the field of business strategy or the subject of disruptive innovation. (*See* Osler Report, at Ex. A.)

Unfortunately, Osler's discussion of "disruptive innovation" seriously misrepresents Ripple's relationship with its former customer MoneyGram. (*See id.* ¶ 71.) She claims that Ripple's 2019 agreement with MoneyGram "was likely intended to seed or jumpstart the necessary network" and to help Ripple "make a stronger case with other potential partners." (*Id.*) However, she omits significant facts about Ripple's relationship with MoneyGram in a way which renders her description misleading. First, Osler knew that Ripple paid MoneyGram more than the $50 million amount mentioned in her report, including additional financial subsidies. (Osler Tr. 242:23-245:24; 249:23-250:5.) And Osler was aware that Ripple's relationship with MoneyGram "did not work out" and had been dissolved. (*Id.* at 247:18-248:25.) But she chose not to mention these facts in her report.

Second, Osler was unaware of the actual reason that Ripple needed to provide subsidies to MoneyGram. She did not know that MoneyGram incurred a variety of additional exchange fees, and significant new costs, as a consequence of using ODL in its money transfer business. (*Id.* at 241:25-242:5.) Nor did she know that Lawrence Angelilli, MoneyGram's Chief Financial Officer, has testified that MoneyGram's only financial benefits from its relationship with Ripple were the substantial subsidy payments paid by Ripple. (Declaration of Lawrence Angelilli (Ex. 31) at ¶¶ 36-39, 41-43.)[17] Angelilli's declaration is crucial to understanding MoneyGram's prior financial relationship with Ripple. Thus, Osler's opinion about MoneyGram is uninformed, speculative, and attributable to Ripple's failure to provide her with the necessary factual record.

3.   Rebuttals by the SEC's Experts

The SEC also obtained rebuttal opinions from two of its expert witnesses that identified important defects in Osler's opinions.

---

[17] Osler never inquired into the nature, purpose, and extent of Ripple's subsidy payments to MoneyGram and had never read Angelilli's declaration, his deposition testimony, or any of Ripple's agreements with MoneyGram. (*See* Osler Tr. 239:18-240:17, 245:3-24.)

        a.   ███   **Rebuttal of Osler's Report**

As noted in Background Section IV.1, ████ is a ████████████████████

████████████████ (████ Rebuttal (Ex. 32) ¶ 1.) He has a ████████ and his

research focuses on international finance, cryptocurrencies, and market manipulation. (*Id.* ¶¶ 1-2.)

He has published a number of academic research papers on issues involving cryptocurrencies, and

he regularly teaches about cryptocurrencies in international finance classes. (*Id.*)

████████ rebuttal report explains the deficiencies in Osler's initial opinions. (*Id.* ¶¶ 10a-f, 11-

43, 52-54.) He notes that the economic definition of a currency *also* requires that it be "regularly

use[d] to buy goods and services," and "regularly accepted" in exchange for goods and services. (*Id.*

¶¶ 11-13.) ████ finds that XRP is not so regularly accepted. It is neither legal tender nor state-

sponsored, so there is no place where it is required by law to be accepted as payment for goods or

services. (*Id.* ¶ 37.) ████ also determines that, as of 2020, XRP was not commonly accepted as a

means of payment by any of the top 100 retailers in the U.S. (including Amazon, Walmart, Best Buy

and Home Depot), which represented 60% of U.S. total retail sales. (*Id.* ¶ 19.) Nor was XRP

accepted as a means of payment by any major credit card processor. (*Id.* ¶ 20.)

████ also finds that XRP is not a good store of value. (*Id.* ¶ 21.) ████ analysis shows

that over a seven-year period XRP fluctuated in value an average of 7.5% each day; this means that

XRP was significantly more volatile than the world's most traded currencies, and also was more

volatile than several of the world's most volatile currencies. (*See id.* ¶ 22 & Fig. 1.)

In addition, ████ finds that XRP is not used regularly as a unit of account, to quote a price

for any goods or services. (*Id.* ¶ 24.) Ripple itself does not report its own sales in units of XRP in its

quarterly sales reports; instead Ripple uses U.S. dollars. (*Id.* ¶ 25 & Fig. 2.) In addition, ████

examined e-commerce retail sites which purported to accept payment in XRP, and found only a

single retailer that offered customers the ability to view their prices in units of XRP. (*Id.* ¶ 26.)

Although Osler claims that each user of Ripple's ODL product pays a fraction of an XRP when XRP is acquired to provide liquidity in a transaction exchanging two currencies, ███ disagrees. (*See Id.* ¶ 28.) In every such transfer, the XRP used in "payment" actually is destroyed on the XRP Ledger and is not paid to (or received by) anyone in exchange for the service provided. (*Id.* ¶ 30 (citing description of XRP Ledger transaction on Ripple's website).)

███ also determines that most of the attributes of a currency identified by Osler are not unique to currencies—and many securities have the same attributes—so the mere fact that XRP has these attributes does not transform XRP into a currency. (*Id.* ¶¶ 38-40.)

Finally, Osler's assertion that a vendor could use Shopify and BitPay to allow customers to purchase items with XRP is misleading. (*Id.* ¶ 41.) ███ notes that XRP is not a medium of exchange unless it is offered by the buyer *and* accepted by the seller. If a seller receives payment in a fiat currency, such as U.S. dollars, instead of in XRP, then XRP has not actually been exchanged in a sale. (*Id.* ¶ 41.) ███ finds that BitPay encourages vendors to simultaneously exchange any digital assets offered in payment for their preferred local fiat currency. (*Id.* ¶¶ 42-43.) Accordingly XRP does not function as a true medium of exchange because the seller ultimately does not receive payments in units of XRP. (*Id.*)

b.   ███   **Rebuttal of Osler's Report**

In addition to issuing an initial report,[18] the SEC asked ███ to issue a rebuttal report responding to Osler's opinions that ODL was a "less costly" substitute for traditional, fiat currency cross-border payments and was a "viable option" for cross-border currency payments. (███ Rebuttal ¶ 6.) Based on his analysis, ███ concludes that it was not economical for any financial institution to use Ripple's ODL product for cross-border payments without receiving all of the

---

[18] Osler also issued a Rebuttal Report in response to certain aspects of ███ initial expert report. Although that Rebuttal Report is not addressed in this motion, the SEC does not concede the accuracy or validity of any of Osler's responses to ███ initial opinions.

financial subsidies provided by Ripple. (*Id.* ¶ 9.) Although Ripple's extensive use of subsidies helped to grow the base of ODL users in the short-term, that growth was not sustainable because ODL lacked "an economically compelling value proposition" for cross-border payments. (*Id.* ¶ 10.)

█████ further observes that Osler's Report provides no actual justification (and no methodology) to explain how ODL could be viewed as "less costly" than traditional methods of cross-border payments using fiat currency. (*Id.* ¶¶ 15-16.) █████ also finds that Osler provides no evidence that Ripple presents an attractive value proposition for ODL to "compete as a payments service provider." (*Id.* ¶ 18.) To the contrary, ODL customers have no reason to use that product other than the significant financial subsidies and incentive payments provided by Ripple. (*Id.*)

B.   The Court Should Exclude Osler's Testimony in Its Entirety.

1. Osler's Opinions are Not Relevant or Helpful to the Trier of Fact.

"Expert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful." *Daubert*, 509 U.S. at 591 (internal quotation marks and citation omitted). To ensure relevance, the Court must ensure that the expert's testimony "'is sufficiently tied to the facts of the case." *Id.* (internal quotation marks and citation omitted). The Court should exclude opinions if they are "irrelevant" to the legal issues presented, *Chen-Oster,* 2022 WL 814074, at *13-14, or if the expert opines on an issue that "is not implicated in [the] case" under the law governing the case, *Fin. Guar.*, 2020 WL 4251229, at *8. *See also supra* Argument Section I.B.2.

Like Ferrell's opinions on the same subject matter, *see supra* at Argument Section VI.D.2, Osler's opinions that XRP *functions* like a currency, and has some common *attributes* of a currency, are neither relevant nor helpful to the Court's determination of the main legal issue. As noted, a *virtual* currency is not a "currency" under the Securities Act and the existence of legal and regulatory regimes as to virtual currencies does not alter their treatment under the federal securities laws. Moreover, even if something were a currency, simply affixing that label does not answer the

question as to whether it was *offered and sold* as an investment contract, because even currencies can

be sold as investment contracts. *See supra* Argument Section VI.D.2. Tellingly, Osler avoids offering

any opinions or analysis related to whether a reasonable purchaser acquired their XRP tokens from

Defendants in the hope or expectation that they would profit from the efforts of Ripple or whether

they hoped to use it as a currency.

Similarly, like Ferrell's opinions on the same subject matter, *see supra* Argument Section

VI.D.3, Osler's opinions that ODL has a good "use" and that XRP has a "use," are irrelevant. As

noted, the fact that items have a potential use does not preclude their offer or sale from being a

securities transaction. Osler's opinions about the potential benefits of ODL to individuals who

engage in cross-border currency exchange will not be relevant or helpful in deciding whether

Defendants sold XRP as part of an investment contract, or any other issue which is relevant to this

case. *See Fin. Guar.*, 2020 WL 4251229, at *9-10. Accordingly, her testimony should be excluded.

2. Osler's Opinions Are Unreliable and Restate Ripple's Factual Arguments.

As discussed in *supra* Argument Section V.B.2, in determining whether an expert's opinion is

reliable, the Court should consider a "theory's testability, the extent to which it 'has been subjected

to peer review and publication,' the extent to which a technique is subject to 'standards controlling

the technique's operation,' the 'known or potential rate of error,' and the 'degree of acceptance'

within the 'relevant scientific community.'" *Romano*, 794 F.3d at 330 (*quoting Daubert*, 509 U.S. at

593-94). The Court has discretion in determining the relevant factors in assessing reliability.

Zuchowicz v. United States, 140 F.3d 381, 386-87 (2d Cir. 1998).

In addition, an expert's testimony may be excluded if her analysis is merely a vehicle for a

factual narrative, *Tourre*, 950 F. Supp. 2d at 675; if she "simply regurgitates what a party has told [her,

which] provides no assistance to the trier of fact through the application of specialized knowledge,"

Arista Records, 608 F. Supp. 2d at 424; or she "impermissibly mirrors the testimony offered by fact

witnesses." *United States v. Amuso*, 21 F.3d 1251, 1263 (2d Cir. 1994). In short, experts are not

permitted to summarize a lengthy factual narrative, or documents produced in discovery, under the

mantle of expert opinions. *Island Intellectual Property LLC v. Deutsche Bank AG*, No. 09 Civ. 2675,

2012 WL 526722, at *2 (S.D.N.Y. Feb. 14, 2012). An expert also cannot serve as a mouthpiece for

the defense on facts that are in dispute.

Osler's opinions suffer from all of the foregoing defects:

Currency Opinions: Osler claims that XRP functions as a currency, *i.e.,* as a medium of

exchange, a means of payment, a unit of account and a store of value, and that like a currency, XRP

was durable, portable, divisible, uniform, acceptable in trade, limited in supply, and inexpensive to

store. (*See* Osler Report ¶ 7.) However, Osler reaches those conclusions without defining the term

"currency," subjecting her theory to any testing, reviewing the published work of any academic or

professional (whether peer reviewed or not), or identifying any standards of what she accepted as

evidence. She does not consider the possibility of error, compare XRP to any other currencies or

digital assets, or indicate if her conclusions had been accepted by other economists. She made no

attempt to study, quantify or verify whether: (1) ODL transactions actually "cost" a fraction of an

XRP; (2) XRP can be used to pay for goods and services; (3) XRP is used to value other things in

exchange; or (4) XRP functions as a durable store of value.[19] (*See id.* ¶¶ 13-15.)

Osler demonstrates a similar lack of objectivity and rigor in concluding that XRP had all the

attributes considered valuable in a currency. (*See id.* ¶ 18.) In discussing the issues of portability,

durability, divisibility and uniformity, she performs no significant analysis and cited only a Ripple

website. (*Id.*) And in support of her finding that XRP is acceptable as a "currency," with low

---

[19] In fact, the *only* chart, graph, or table Osler created in analyzing these questions was a comparison
of the exchange rate between the British pound and the U.S. dollar. (Osler Report ¶ 14, Fig. 1.)

storage costs and limited supply, Osler cites only a single *Forbes* article. (*Id.*) Such a superficial approach to economic analysis presumably would conclude that *any* digital token was a currency.

By contrast, the SEC's rebuttal expert, █████ actually tested Osler's opinions about XRP and reached very different conclusions. (*See* █████ Rebuttal ¶¶ 10a-f, 11-43, 52-54.) First, █████ finds that a currency is something that is "regularly use[d]" and "regularly accepted" in purchasing goods and services. (*Id.* ¶¶ 11-14.) Second, XRP is not a "means of payment" because, as of 2020, XRP was not accepted for payment by any major U.S. retailer or credit card processor. (*Id.* ¶¶ 19-20.) Third, XRP is an extremely poor store of value because the price of XRP historically fluctuated an average of 7.5% each day, which is significantly more volatile than the world's most traded and most volatile currencies. (*See Id.* ¶ 22 & Fig. 1.) Fourth, XRP is not used regularly, by Ripple or by anyone else, as a unit of account, to quote a price for any goods or services. (*Id.* ¶¶ 24-26.) Fifth, XRP is not used as a method of payment for ODL transactions because XRP actually is destroyed on the XRP Ledger and is not paid to anyone. (*Id.* ¶ 30.) Sixth, most of the attributes which Osler identifies with a currency are not unique to currencies, and securities have many of the same attributes. (*Id.* ¶¶ 38-40.) Finally, Osler's suggestion that consumers can use XRP to purchase goods on Shopify is misleading. (*Id.* ¶ 41.) XRP is not actually exchanged through Shopify because vendors are encouraged to exchange XRP for fiat currency. (*Id.* ¶¶ 42-43.)

ODL Opinions: Osler claims that ODL, which relies on the XRP Ledger and uses XRP, is an "economically sound option" for "cross-border and cross-currency payments." (Osler Report ¶¶ 7, 19-74.) Once again, Osler reaches those conclusions without (a) subjecting ODL, XRP, or the XRP Ledger to any testing; (b) reviewing any academic or professional studies of XRP or ODL; or (c) identifying any standards for what she accepts as evidence. She does not consider the possibility of error, compare ODL or XRP to any other asset transfer system with similar attributes, or indicate if her conclusions are accepted by other economists.

In evaluating the potential success of Ripple's ODL process, Osler simply relies on Ripple's own claims about ODL, data and documents about ODL produced by Ripple, popular articles describing Ripple's *goals* for ODL, or sources that are not identified. (*See id.* ¶¶ 36, 41-44, 45, 53-55, 57-60, 62-64.) In describing the features of blockchain technology, or the operations and capabilities of Bitcoin and Ether, Osler cites only a few popular and industry publications, or to no sources at all. (*See id.* ¶¶ 46-52, 56.) And finally, in describing the business strategy of "disruptive innovation," and Ripple's likelihood of success with ODL, Osler only cites a Ripple executive, two academic articles, the SEC's Amended Complaint, a few publicly-available data points about other businesses, and a CNBC article touting Ripple. (*See id.* ¶¶ 65-74.)

Nothing about Osler's ODL opinions are based on any reliable scientific or economic principles, analysis or studies. To the contrary, Osler's ODL opinions are mostly a repetition of factual information obtained from Ripple, which would be improper as opinion testimony, but could instead be offered through the testimony of Ripple employees or documents. *See Island Intellectual Property*, 2012 WL 526722, at *2.

Further, Osler's discussion of ODL as a "disruptive innovation" is unreliable because it mischaracterizes Ripple's relationship with MoneyGram. Osler claimed that Ripple's 2019 agreement with MoneyGram "was likely intended to seed or jumpstart the necessary network" of ODL customers. (Osler Report ¶ 71) However, Ripple paid MoneyGram more than $50 million, and Ripple's relationship with MoneyGram subsequently dissolved, but Osler chose not to mention any of these facts in her report. Osler's opinion also ignores MoneyGram's CFO's testimony that the company did not realize any cost savings as a result of using ODL, and only benefitted financially from the subsidy payments it received from Ripple.[20] This evidence directly undercuts

---

[20] ▓▓▓▓ agreed that it is not economical for any financial institution to use ODL for its cross-border payments without receiving significant subsidies. (*See* ▓▓▓▓ Report ¶¶ 9-10, 15-16, 18.)

Osler's adoption of Ripple's statements that ODL, the XRP Ledger, and XRP are less costly than traditional payments platforms.

3. Osler Lacks the Necessary Qualifications to Offer Her Opinions.

This Court has "broad discretion" to determine whether a witness is qualified as an expert, and to exclude any proposed expert who lacks sufficient training or experience in the relevant subject matter. *McCullock v. H.B Fuller Co.*, 981 F.2d 656, 657 (2d Cir. 1992) (internal quotation marks and citation omitted). In determining whether a proposed expert is sufficiently qualified, "courts compare the area in which the witness has superior knowledge, education, experience, or skill with the subject matter of the proffered testimony." *United States v. Tin Yat Chin*, 371 F.3d 31, 40 (2d Cir. 2004). A proposed expert's experience "must be demonstrated and have a direct relevance to the issues in the case." *Krause*, 984 F. Supp. 2d at 79 (excluding railroad safety expert who offered opinions regarding a worker's stress); *see also supra* Argument Section III.B.3. Here, Osler is no more qualified to offer opinions about the features of XRP, or the costs and benefits of Ripple's ODL product, than one of Ripple's own employees or attorneys.

Osler clearly would be qualified to testify generally about the functions and attributes of a currency. However, she does not have any special training or experience in evaluating cryptocurrencies. Accordingly, she lacks the expertise required to offer an opinion on whether XRP functioned as a "currency" under any definition of that term.

Similarly, based on her knowledge obtained studying foreign exchange trading, Osler would appear to be qualified to offer opinions about the trends, costs and benefits of currency remittances between the official currencies of nations, foreign exchange transactions, and the differing methods of cross-border payments. But she does not have any special training or experience in evaluating Ripple's ODL product or studying disruptive innovative technologies and she does not contend otherwise. Further, she has no special knowledge about the speed, costs, transparency or

76

environmental benefits that ODL might offer for cross-border payments over existing technologies, and she relies solely on Ripple's *ipse dixit*, including facts in dispute. Accordingly, Osler is not qualified to offer an opinion that Ripple's ODL product is an economically sound option for making cross-border and cross-currency payments. Nor is she qualified to opine that Ripple is pursuing a prudent strategy of disruptive innovation, or that ODL's lack of profitability is the hallmark of a superior technology, rather than an imperfect technology or a flawed business model.

VIII.   Fischel's First and Fourth Purported Rebuttal Opinions Should Be Excluded.

Fischel, the president of a litigation consulting firm and a frequent expert witness, has offered four opinions that purport to rebut opinions offered by one of the SEC's experts, Dr. ██████ ███ Among other things, ████ conducted an event study and found that XRP's price rose significantly in response to 95 positive public announcements by Ripple. Fischel, who has conducted hundreds of event studies in other cases, did not conduct any event study to rebut ████ opinions. Instead, Fischel's first and fourth opinions (the "*Howey* Opinions") expressly purport to answer whether a *Howey* element is satisfied—*Howey*'s "expectation of profits" and "common enterprise" prongs. These two opinions should be excluded because they do not rebut any opinion from ████ report and because they are improper and incorrect legal conclusions. In addition, Fischel's fourth opinion, the "common enterprise" opinion, should be excluded as unreliable.[21]

A.   Fischel's Background and Rebuttal Opinions

1. Fischel's Background

Fischel is the president of a litigation consulting firm he joined in 1981. (Fischel Report (Ex. 33) ¶ 1; Fischel Tr. (Ex. 34) 27:17-24.) He formerly taught at the University of Chicago Law School but has been on *emeritus* status since 2006 and has not published any articles since then. (Fischel Tr.

---

[21] While the SEC disagrees with Fischel's second and third opinions, it will challenge those opinions on cross-examination, should this case proceed to trial.

33:5-14.) He now devotes all of his professional time to litigation consulting (*id.* at 15:17-25), and

has testified hundreds of times as an expert witness (Fischel Report Appx. A at 4-31).

2. The Expert Reports Fischel Purports to Rebut

Defendants engaged Fischel to rebut ▉▉▉ (Fischel Report ¶ 14; Fischel Tr. 62:16-21.) The

SEC asked ▉▉ to analyze XRP's price movements and assess whether announcements by Ripple

of intended or actual actions by Ripple impacted XRP's price. (Fischel Report ¶ 10.) As noted,

▉▉ conducted an event study that employed a scientifically-accepted statistical analysis to more

than 500 separate news announcements by Ripple. (▉▉ Report ¶ 49.)[22]

▉▉ event study sought to examine whether the price of XRP increased in response to

several categories of positive news about Ripple or XRP. (*Id.*) ▉▉ found that XRP's price rose

significantly in response to 95 such positive public announcements. (*Id.* ¶¶ 68-90.) He also

identified 24 days in which positive Ripple news events correlated with significant positive XRP

price returns that could not be explained by random chance. (*Id.* ¶¶ 98-102.) ▉▉ later issued a

supplemental expert report, in which he performed an empirical analysis regarding the economic

impact of Ripple announcements on XRP's price. ▉▉ Supplemental Report shows: "But-for the

news and public statements related to Ripple to which XRP prices reacted in a statistically significant

way, the USD price per XRP token would have rarely exceeded $0.02." (▉▉ Supp. Report ¶ 9.)

▉▉ reports make no mention of *Howey* or any of *Howey*'s elements for determining the

existence of offers or sales of investment contracts. Fischel concedes that ▉▉ does *not* offer the

opinion that XRP is a security under *Howey* or opine whether any element of *Howey* is satisfied.

(Fischel Tr. 102:18-103:13, 136:19-23; ▉▉ Tr. (Ex. 35) 228:8-229:34; 331:3-9 (disclaiming any

---

[22] Fischel recognizes that event studies are commonly used in litigation "to measure the impact of certain events on market prices," including the prices of securities. (Fischel Report ¶ 32). Fischel himself has performed event studies for litigation "[h]undreds, if not thousands of times." (Fischel Tr. 35:6-16).

opinion as to *Howey* elements).) Fischel also recognizes that ▮ does *not* opine whether an event study can establish the offer or sale of securities. (Fischel Tr. 152:12-18.)

3. Fischel's Rebuttal Opinions

Fischel does not dispute ▮ qualifications. (Fischel Tr. 77:24-78:6.) Instead, Fischel offers four rebuttal opinions to ▮ initial report. Two of these—the first and fourth opinions— rely on Fischel's interpretation of *Howey* and should be excluded, as discussed below. In his first opinion, Fischel opines that ▮ event study does "not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple" (Fischel Report ¶¶ 14, 17-20), which relates to *Howey*'s "expectation of profits" prong. In his fourth opinion, Fischel opines that ▮ event study does not "shed any light on whether XRP holders are engaged in a 'common enterprise' with Ripple" (*id.* ¶¶ 14, 31-34), which relates to *Howey*'s "common enterprise" prong.[23] Since ▮ did not purport to opine on those legal or factual conclusions, Fischel's opinion on that score is not a rebuttal of anything and is patently unhelpful to the resolution of this case.

Fischel offers these opinions despite claiming not to opine on (a) the interpretation of the term "investment contract" under the securities laws, or (b) whether any XRP transaction constituted the offer or sale of investment contracts. (Fischel Tr. 34:8-20.) Fischel concedes there is no accepted *economics* definition of an "investment contract." (*Id.* at 101:4-7, 105:2-9.) Fischel has stated that his *personal* understanding of the "economic" meaning of the term is an "investment the

---

[23] Fischel later issued a supplemental report, in which he offers a rebuttal opinion to ▮ supplemental report. (Fischel Supp. Report (Ex. 36).) In his supplemental report, Fischel opines that "the ▮ Supplemental Report does not address any of the fundamental flaws that were discussed in the Fischel Rebuttal Report, and thus his new analysis suffers from the exact same fundamental flaws." (*Id.* ¶ 10.) Fischel then re-offers his original four opinions. (*Id.* ¶ 10(i)-(iv).)

success of which varies based on the success or lack of success or -- of whatever the firm or venture that the economic actor is investing in." (*Id.* at 101:4-13, 105:10-21.)

Fischel did not perform his own event study related to XRP or any other digital asset. (*Id.* at 35:18-20, 69:10-17, 70:14-18, 79:24-80:17; 218:17-20.) Specifically, he did no work to determine if Ripple's news announcements impact XRP prices or if XRP trades in an efficient market.[24] (*Id.*) Fischel similarly chose not to perform any quantitative assessments about the effect of confounding information on XRP's price, despite criticizing ███ event study for purportedly including confounding information. (*Id.* at 95:24-96:5, 158:21-160:15; Fischel Report ¶ 14(ii).)

B.   Fischel's *Howey* Opinions Are Impermissible and Incorrect Legal Conclusions That Should Be Excluded.

Fischel's first and fourth opinions, respectively concerning *Howey*'s "expectation of profits" and "common enterprise" prongs, are impermissible legal conclusions. They are also based on an incorrect recitation of *Howey*'s elements and do not accurately reflect the current state of the "*Howey* Test," as developed by subsequent courts.

1.   Fischel's *Howey* Opinions Are Impermissible Legal Conclusions.

Fischel's first and fourth opinions, respectively about *Howey*'s "expectation of profits" and "common enterprise" prongs, are precisely the types of expert testimony about "governing law" that courts instruct must be excluded. *Highland Cap. Mgmt., L.P. v. Schneider*, 379 F. Supp. 2d 461, 469 (S.D.N.Y. 2005). Fischel begins his report by discussing *Howey*'s analysis for determining the existence of an investment contract, which Fischel refers to as the "*Howey* Test." (Fischel Report ¶ 7 & n.10.) Fischel proceeds to offer two primary opinions that interpret *Howey* as part of his overall critique of "the SEC's claim that XRP is a security under the *Howey* Test." (*Id.* ¶¶ 14, 16.) In his first

---

[24] Fischel recognizes that event studies are commonly used to determine the informational efficiency of markets of securities and other assets. (Fischel Report ¶ 32). Fischel concedes that he could have conducted an event study to determine the XRP market's efficiency (Fischel Tr. 68:2-6), but chose not to (*id.* at 69:10-17, 70:14-18).

Howey Opinion, Fischel posits that ▮▮▮ "do[es] not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple." (*Id.* ¶¶ 14(i), 17-20.) In the second *Howey* Opinion, Fischel states that ▮▮▮ does not "shed any light on whether XRP holders are engaged in a 'common enterprise' with Ripple." (*Id.* ¶¶ 14(iv), 31-34.)

These opinions should be excluded because Fischel is telling the Court and jury his views on what the law is and how it should be applied. *Choi v. Tower Research Cap. LLC*, 2 F.4th 10, 20 (2d Cir. 2021) (affirming exclusion of expert report which "functions as little more than a legal brief that parrots plaintiffs' arguments"). His opinions about the "*Howey* Test" are impermissible legal conclusions about "governing law," "technical legal terms," and "legal requirements." *Highland Capital*, 379 F. Supp. 2d at 470-72; *Bilzerian*, 926 F.2d at 1295. Just as the expert in *Scop* could not offer an opinion which "drew directly upon the language of the statute and accompanying regulations concerning 'manipulation' and 'fraud,'" 846 F.2d at 140, Fischel should not be allowed to offer opinions which use language from *Howey* to opine that its elements have not been satisfied, much less opine about what legal conclusions flow from an SEC's expert report that does not purport to answer any legal test. And just like in *Tourre*, permitting Fischel to explain his views on *Howey* and its application to the facts of this case risks "suggest[ing] to the jury that their job is done, that they have been told the answer to an ultimate question." 950 F. Supp. 2d at 678.

2. Fischel's *Howey* Opinions Misstate the Law.

In addition, the Court should exclude Fischel's *Howey* Opinions for incorrectly stating the law governing the key question at issue in this case: whether Defendants offered and sold XRP as an investment contract. *See, e.g., Fin. Guar.*, 2020 WL 4251229, at *8-9 ("Dr. Snow's projections…are contrary to New York law, and courts routinely exclude expert opinions in such circumstances.") (citations omitted); *Olin Corp.*, 2018 WL 1901634, at *21 ("Expert testimony also should be excluded when it applies the wrong legal standard.").

81

Not only does Fischel misstate *Howey*'s requirements, Fischel's *Howey* Opinions are incorrect and misleading because they fail to account for subsequent decisions that explain *Howey*'s analysis for determining the existence of an investment contract. Indeed, Fischel does not consider any court opinion applying *Howey*. (Fischel Tr. 104:2-12.) As shown below, the language of Fischel's opinions differs from the language in *Howey*:

Howey Prong	Fischel's Opinions
"Common enterprise" prong: "whereby a person *invests his money* in a common enterprise." 328 U.S. at 298-299 (emphasis added).	Dr. ▮▮▮▮ findings do not "shed any light on whether XRP holders *are engaged in* a 'common enterprise' with Ripple." (Fischel Report ¶ 14(iv); Fischel Supp. Report ¶ 10(iv) (emphasis added).)
"Expectation of profits from the efforts of others" prong: "*led to expect* profits solely from the efforts of the promoter or a third party." 328 U.S. at 298-299 (emphasis added).	Dr. ▮▮▮▮ findings "do not demonstrate that XRP holders profit solely or primarily from the efforts of Ripple." (Fischel Report ¶ 14(i); Fischel Supp. Report ¶ 10(i).)

Despite acknowledging that *Howey* does not use the language "*engaged in* a common enterprise" (Fischel Tr. 146:5-147:1), Fischel misstates *Howey* by opining on investors being "engaged" in a common enterprise, as opposed to "investing" in one. This is an incorrect articulation of *Howey*, because it suggests that investors must be actively engaged with Ripple in a manner that *Howey* does not require. To establish the "common enterprise" prong of *Howey*, what is required is that the fortunes of each investor are tied to the fortunes of other investors and to the success of the overall enterprise, or alternatively "that the fortunes of investors be tied to the fortunes of the promoter." *Revak*, 18 F.3d at 87-88 (citations omitted). This can be established, among other things, when the seller of securities pools investors' money, as opposed to "a scenario where the funds of each investor were segregated and separately managed." *Kik*, 492 F. Supp. 3d. at 178-179 (citations omitted).

Stated differently, to the extent Fischel speaks of being "engaged" in a "common enterprise," he appears to be conflating the "common enterprise" with the "efforts of others"

prongs of *Howey*. But even for that latter prong, *Howey* does not require investors to be "engaged" in anything. To the contrary, *Howey* applies when investors' participation is "passive," *see, e.g., Leonard,* 529 F.3d at 88-90 (*Howey* satisfied when investors "played an extremely passive role in the management and operation of the companies"); where they cannot reasonably be expected to take the steps necessary to make the enterprise a successful one and must rely on the promoter of the investment to do so, *Aqua-Sonic,* 687 F.2d at 585 (same result when "Defendants sought to attract the passive investor for whose benefit the securities laws were enacted"); or when whatever efforts the investors must undertake are merely "incidental," *Howey,* 328 U.S. at 300.

Fischel likewise ignores how courts have recently evaluated *Howey*'s "common enterprise" prong to offers and sales of digital or crypto assets. In that context, a common enterprise can exist where the seller of digital assets uses investors' "funds for its operations, including the construction of the digital ecosystem it promoted" or "to increase the range of goods and services that holders of [the digital asset] would find beneficial to buy and sell with [the digital asset]." *Kik,* 492 F. Supp. 3d at 178-179; *see also Telegram,* 448 F. Supp. 3d at 369-370 ("Telegram pooled the money received from the Initial Purchasers and used it to develop the TON Blockchain."). Simply put, the "common enterprise" prong of *Howey* has nothing to do with "engage[ments]" and everything to do with the nature of how investment returns are achieved.

To the extent Fischel is offering opinions about *Howey*'s "profits from the efforts of others" prong, Fischel also misinterprets *Howey* by focusing on the *actual impact* of Ripple's efforts, as opposed to what Ripple led investors to expect. *See, e.g., Telegram,* 448 F. Supp. 3d at 371 ("The inquiry is an objective one *focusing on the promises and offers* made to investors.") (emphasis added); *Kik,* 492 F. Supp. 3d. at 179 (*Howey* satisfied where "[i]n public statements and at public events promoting Kin [digital token], Kik extolled Kin's profit-making potential"); *Warfield,* 569 F.3d at

1021 ("Under *Howey*, courts conduct an objective inquiry into the character of the instrument or transaction offered *based on what the purchasers were 'led to expect.'*") (emphasis added).

Similarly, Fischel's opinions about profits "solely or primarily from the efforts of Ripple" ignore that "the word 'solely' should not be construed as a literal limitation; rather, [the Second Circuit] 'consider[s] whether, under all the circumstances, the scheme was being promoted primarily as an investment or as a means whereby participants could pool their own activities, their money and the promoter's contribution in a meaningful way.'" *Leonard*, 529 F.3d at 88 (quoting *Aqua-Sonic*, 687 F.2d at 582). This prong of *Howey* can also be satisfied by showing "reasonable expectation of profits to be derived from the entrepreneurial or managerial efforts of others." *Forman*, 421 U.S. at 852. Fischel concedes that he is not opining on any of these subsequent refinements of *Howey*. (Fischel Tr. 108:11-25, 109:6-13.)

Fischel should not be allowed to offer incorrect and restrictive interpretations of *Howey* that improperly ignore the various means by which the SEC can prove the existence of an investment contract. Moreover, should this case proceed to trial, the Court, not Fischel, will instruct the jury on the legal meaning of "investment contract" under *Howey* and its progeny.

3. The Court Should Exclude Fischel's *Howey* Opinions as Improper Rebuttal.

Fischel's *Howey* Opinions do not actually rebut ███ opinions, go beyond the scope of ███ reports, and should be excluded for that independent reason. As discussed above in Argument Section IV.B.2, Rule 26 only allows the admission of rebuttal testimony "if it is 'intended solely to contradict or rebut evidence on the same subject matter' of the other party's expert report." *Rekor*, 2022 WL 2063857, at *7-9 (quoting Fed. R. Civ. P. 26(a)(2)(D)(ii)). Accordingly, courts properly exclude rebuttal testimony that "does not rebut or contradict" another expert or offers "new" material or arguments that should have been disclosed in an opening expert report. *See, e.g., id.* (striking rebuttal report that "strays far afield" from, and opines on "issues not addressed" in,

opening expert report); *see also AmTrust N. Am., Inc. v. KF&B, Inc.*, No. 17 Civ. 5340, 2020 WL

5578675, at *5 (S.D.N.Y. Sept. 16, 2020) (excluding plaintiff's rebuttal expert, who did not rebut the

other parties' expert and merely "buttress[ed]" another of plaintiff's experts); *Liddle*, 2009 WL

4907201, at *4-5 (excluding rebuttal report that did not address new material in opposing expert's

report and instead "rehashe[d] the conclusions" from an opening report).

Fischel concedes that ▇▇ does *not* offer an opinion that (a) XRP holders profit "solely or

primarily" from the efforts of Ripple or (b) XRP holders are engaged in a common enterprise with

Ripple. (Fischel 105:22-106:11, 136:19-23). Indeed, neither ▇▇ Report nor his Supplemental

Report mentions *Howey* or the term "common enterprise." Because Fischel purports to rebut

opinions that ▇▇ does not actually offer, Fischel's "profits" and "common enterprise" opinions

should be excluded as improper rebuttal.

4.   Fischel's Fourth Opinion Is Unsupported and Unreliable.

The Court should exclude Fischel's "common enterprise" opinion for yet another reason: it

is unreliable. Fischel recognized that "common enterprise is, in part, a legal term." (Fischel Tr.

139:2-14.) He thus could not identify an accepted economics definition of "common enterprise."

(*Id.* at 143:6-144:3 ("I don't know if I'd say there's an accepted definition.")). Given the lack of a

recognized standard to utilize, Fischel could not identify any work or testing he performed to

determine whether any common enterprise existed. (*Id.* at 136:24-143:4.)

This lack of testing and inability to cite an accepted standard dooms Fischel's "common

enterprise" opinion. *See, e.g., Chen-Oster*, 2022 WL 814074, at *6, 8 (excluding expert's opinions since

it was "not clear if the data supports her conclusions," and excluding another expert for relying on

"insufficient data" since the expert "does not show that his data is 'a fair proxy' for the process he

claims to be analyzing") (citations omitted); *Wilson*, 2016 WL 7229056, at *7-11 (excluding expert

opinions as unreliable where experts examined insufficient data, utilized a method that was not

"generally accepted" and "failed to provide any reliable authority"); *CFTC v. Moncada*, No. 12 Civ. 8791, 2014 WL 2945793, at *3 (S.D.N.Y. June 30, 2014) (expert excluded because he "did not perform any quantitative analysis of the trade data" and disclosed no methodology for his analysis).

Indeed, without an accepted definition to evaluate a "common enterprise," and having not performed any testing or analysis on whatever standard he employed, Fischel's opinion rests on nothing more than his own *ipse dixit* and must be excluded. *See Wilson*, 2016 WL 7229056, at *9.

IX.   Marais's Testimony Should Be Excluded in Its Entirety.

Marais's testimony—rebutting ▮▮▮▮ conclusion that certain Ripple news affected XRP's prices—should be excluded in its entirety because (i) his critique is premised on ▮▮▮▮ omission of a step unrecognized in any standard event study methodology, and (ii) his analysis actually supports, rather than undercuts, ▮▮▮▮ conclusion that Ripple news had a significant impact on XRP prices.

A.   Marais's Background

Marais is an executive vice president at a consulting firm, Compass Lexecon, and has served as a frequent expert witness since the mid-1990s, testifying approximately 100 to 200 times. (Marais Tr. (Ex. 37) 13:25-14:9; 14:14-15:21.) His expert opinion has been excluded by courts, in whole or in part, on at least four occasions. (*Id.* at 23:12-25:17; 57:13-58:1.) Marais does not consider performing event studies "a standard practice" of his, although he has conducted them. (*Id.* at 27:25-29:1; 45:12-46:10.) He conducted approximately six event studies as an expert witness, most recently approximately 20 years ago. (*Id.* at 26:9-22; 48:1-6.) Nevertheless, Marais is familiar with the use of event studies in litigation and has authored articles on the topic. (*Id.* at 45:12-46:10.)

B.   Marais's Rebuttal Opinions

Marais provided two rebuttal opinions, one directed at ▮▮▮▮ opening report, dated November 12, 2021 ("Marais Rebuttal" (Ex. 38)) and another directed at ▮▮▮▮ supplemental

report, dated May 13, 2022 ("Marais Supp." (Ex. 39)). Both address ██ conclusions regarding

the effects of Ripple's publicly stated actions on XRP prices. (Marais Tr. 131:10-21.)[25]

In his Rebuttal, Marais opines that (i) ██ statistical analysis "cannot prove a causal

relationship between Ripple's actions and XRP price movements," and (ii) even if it could, ██

analysis does not "support the conclusion, in economic substance, [that] movements in XRP prices

solely or predominantly reflect responses to disclosures about Ripple's actions" because they

account for "no more than a modest, far from preponderant portion" of XRP's abnormal price

returns since 2014. (Marais Rebuttal ¶¶ 5, 30.) In his Supplemental Rebuttal, Marais opines: (i)

██ demonstration of substantial XRP returns attributable to Ripple's actions is a "tautology" and

"not surprising" because removal of any abnormal returns "is expected to reduce the would-have

been prices," (Marais Supp. ¶¶ 12, 17); and (ii) ██ but-for price calculation is unreliable because

"he has not established that any of his 20 alternative models can be used to reliably forecast XRP

returns." (*Id.* ¶¶ 18-22.)

C.   **Marais's Rebuttal Opinion that ██ Event Study Does Not Show that XRP Price Movements Do Not "Solely or Predominantly" Reflect Reactions to Ripple's Actions Should Be Excluded.**

Marais opines that ██ event study does not show that XRP price movements "solely or

predominantly" reflect reactions to Ripple's actions because they account for "no more than a

---

[25] At first, Marais did not dispute ██ qualifications to offer his opinions and admitted that ██ methodological design was reliable (*see* Marais Tr. 122:17-123:3; 125:6-13; 180:10-25), undercutting a belated criticism of ██ qualifications and design in Marais's Supplemental Rebuttal (*see, e.g.,* Marais Supp. ¶ 21-22 & n.25). At most, Marais questions various aspects of ██ methodology (*see* Marais Rebuttal ¶ 14), but testified that none of these critiques was the basis of any of his expert opinions (*see* Marais Tr. 175:17-179:4 (estimation windows); *id.* at 179:5-180:25 (confounding news); *id.* at 181:5-24 (categorization of news events); *id.* at 184:1-18 (construction of digital asset indices)).

modest, far from preponderant portion" of XRP's abnormal price returns since 2014.[26] (Marais Rebuttal ¶¶ 5, 30.) This opinion should be excluded because it is procedurally improper, methodologically unreliable, and contradicted by Marais's own analysis.

1. Marais's Opinion Goes Beyond the Scope of ██████ Opening Report.

Marais's opinion is improper because, as he conceded, it "go[es] beyond" the opinions ██████ set forth in his opening report. (Marais Tr. 116:5-24.) When asked to identify the portion of his Rebuttal that went "beyond" ██████ conclusions, Marais pointed to his assignment from counsel to determine "whether, based on [Marais's] expertise, ██████ opinions support the contention that, in economic substance, movements in XRP prices solely or predominantly reflect responses to disclosures about Ripple's actions." (*Id.* at 116:25-118:5; Marais Rebuttal ¶ 5.)

Marais explained that he did not believe that ██████ had actually opined as to whether "movements in XRP prices solely or predominantly reflect responses to disclosures about Ripple's actions," and that, in addressing this question, his opinions "go beyond what Dr. ██████ seems to assert directly in his own conclusions." (Marais Tr. 116:25-119:4.) As such, they are improper rebuttal and should be excluded. *See* Argument Section IV.B.2.

2. Marais's Opinion Is Unreliable Because It Introduces a Novel, Unrecognized Step for Event Studies.

Marais's opinion is improper because it is premised solely on a comparison of two types of days with statistically significant abnormal XRP returns: (i) those with Ripple news events identified by ██████ and (ii) those without such events. Marais first prepared "[s]imple tallies," merely counting how many days fell into each category. (Marais Report ¶¶ 17-26 & Tables 1, 2.) He then calculated

---

[26] Marais's other Rebuttal opinion—that ██████ event study is insufficient to show Ripple's actions affected XRP's prices—also should not be credited in light of Marais's contradictory testimony that event studies are in fact used in litigation to address the question of whether "an announcement caused a price reaction." (Marais Tr. 51:21-52:20; *see also id.* at 63:3-8 ("Q. Is it fair to say that on some occasions, event studies establish that prices react to news? A. That's broadly what event studies are used for. So on some occasions, that does seem to be the case, yes.").)

the cumulative, compounded returns that a hypothetical investor would make from investing $1.00

on days with statistically significant abnormal XRP returns and (i) with Ripple news events identified

by ▮▮▮ and (ii) without such events. (*Id.* ¶¶ 21, 27-30 & Table 3.)

Marais cites no economics or statistics literature for the proposition that the existence (or

number) of days with abnormal returns and without any news events is relevant to whether there

was a statistically significant price reaction associated with certain news events, or that it is proper to

simply count returns on such days to reach conclusions about that question. (▮▮▮ Report ¶ 12.)

On the contrary, in "Event Study Methods: Detecting and Measuring the Security Price Effects of

Disclosures and Interventions," Marais described the steps to properly construct an event study, and

never suggested that in order to assess the impact of news events, one must check for the

significance of abnormal returns on days without the studied news events. *See* Marais, et al., n.11.

Marais's attack on ▮▮▮ event study methodology is unsupported and should be excluded. *See*

Wilson, 2016 WL 7229056, at *11.[27]

3. Marais's Opinion Is Contradicted by His Own Methodology and His Supplemental Rebuttal Opinion.

Marais's opinion is unreliable because it does not support his conclusion that ▮▮▮ event

study shows "at best that any dependence of XRP price movements on Ripple-related news

accounts for no more than a modest, far from preponderant portion of XRP's Unusual price

---

[27] Perhaps unsurprisingly given the irrelevance of this exercise, Marais was unable to recall any
occasion where, as part of conducting an event study, he investigated abnormal price reactions on
days without the news events in question. (Marais Tr. 67:8-14.) He similarly could not identify an
occasion where, having conducted an event study, he concluded that there was no link between a
news event and an abnormal price reaction because of the existence of significant abnormal returns
on other no-news days. (*Id.* at 67:8-14; 114:3-115:18.)

movements since 2014." (Marais Report ¶ 30.) Instead, his analysis actually supports ███████ findings, as it demonstrates that Ripple's actions were of overwhelming importance to XRP's price.

Marais concludes that a hypothetical investor would have profited more by investing on statistically significant abnormal XRP return days without Ripple news events, than by investing on statistically significant abnormal XRP return days with such events, largely because there were a greater number of days in the former category (which, as noted, is methodologically unsupported).[28] (Marais Report ¶¶ 21-22, 26, 28-29.) For example, Marais focuses much of his Rebuttal on ████ key milestone news events category, minimizing ████ results as establishing an association between Ripple news events and "a relative handful" of statistically significant abnormal XRP returns, compared with Marais's finding of "the overwhelming preponderance of compounded investment returns" associated with non-news days. (*Id.* ¶¶ 17-22 & Table 1.) But a closer look at Marais's entire data set supports ████ conclusion that Ripple news had an overwhelming impact on XRP price returns. (████ Supp. Report ¶ 9.) Marais's Table 3 supplies cumulative XRP returns associated *with* Ripple key milestone news events days ($2.05) and *all* trading days ($92.55), and Marais testified that, with this information, one can determine the cumulative returns associated with trading days *without* Ripple news events ($45.06). (Marais Tr. 211:12-223:11 & LM-5 (Ex. 40).) Accordingly, Marais conceded that, without the *five* Ripple news event days of the *2,007 day* trading period, his hypothetical investor's returns would drop by 50%, from $92.55 to $45.06. (*Id.* at 228:24-229:9.) The same exercise applied to Marais's calculation of cumulative XRP returns for ████ combined categories of Ripple news (not just key milestone news events) yields even more

---

[28] Even this calculation is incorrect in parts of Marais's Rebuttal. As Marais conceded at deposition, the correct ratio of cumulative returns for "unexplained" abnormal return days versus abnormal return days with Ripple news is actually approximately 15 times, not "more than 2.1 million times," as set forth in Marais Rebuttal ¶¶ 21, 28. (Marais Tr. 196:2-197:25.)

striking results. Without Ripple news days, Marais's hypothetical XRP investor's return for all

trading days drops from $92.55 to 66 cents. (*Id.* at 229:10-240:8 & LM-6 (Ex. 41).)

Thus, in an about-face from his previous position, Marais candidly concedes in his

Supplemental Report that ███ conclusion that Ripple's actions significantly impacted cumulative

XRP price returns is "consistent with what can be learned from [Marais's] own Rebuttal." (*Id.* at

229:10-240:8 & LM-6; Marais Supp. ¶¶ 8, 12, 17 (conceding that ███ demonstration of substantial

cumulative XRP returns attributable to Ripple's public actions is "not surprising" because removal

of any abnormal returns "is expected to reduce the would-have been prices").[29]

Given the inconsistencies in Marais's own opinions and the contradictory results of his own

analysis, Marais's opinions are unreliable. *See Amorgianos v. Nat'l R.R. Passenger Corp.*, 303 F.3d 256,

266 (2d Cir. 2002) ("[W]hen an expert opinion is based on data, a methodology, or studies that are

simply inadequate to support the conclusions reached, *Daubert* and Rule 702 mandate the exclusion

of that unreliable opinion testimony.").

**D.   Marais's Supplemental Rebuttal Opinion that ███ Counterfactual Price
         Methodology Is Unreliable Should Be Excluded.**

Having conceded the economic effect of removing abnormal XRP returns associated with

Ripple news days that ███ identified (Marais Supp. ¶¶ 12, 17), Marais now contends that ███

measurement of that economic effect is unreliable because "Dr. ███ has not established that any of

his 20 alternative models can be used to reliably forecast XRP returns" because such models do not

predict identical XRP returns for a given day. (*Id.* ¶¶ 18-22 & Figure 3.)

Marais's opinion should be excluded as unreliable *ipse dixit*. Marais cites no economic

literature that suggests that, to construct a counterfactual price analysis, ███ must select one

---

[29] Marais attempts to cast doubt on ███ removal of abnormal returns associated with Ripple news
days to construct his counterfactual prices, comparing this exercise to the random removal of
returns on Wednesdays. (Marais Supp. ¶ 14 & Fig. 1.) But ███ removal of abnormal returns
associated with Ripple news days was not random, as Marais recognized. (Marais Tr. 122:17-123:3.)

particular model to *forecast* XRP returns in order to express his opinion. (*Id.* ¶ 21.) ██ is not forecasting XRP returns—██ is examining what XRP's price would have been, historically, without certain Ripple news events. (*See* ██ Supp. Report ¶¶ 9-19 & Figures 1-5.) Nor does Marais cite anything that suggests that, to construct a counterfactual price analysis, ██ must rely on one particular model. And ██ conclusion—that but-for the Ripple news events identified in his opening report, XRP prices would have rarely exceeded two cents—is premised upon counterfactual XRP price data generated by *all* of his models. Across all 20 models, more than 90% of ██ counterfactual XRP prices are below two cents. (██ Supp. Report ¶ 16 & Figure 3.)

X.   Shampanier's Purported Rebuttal Testimony Should Be Excluded in Its Entirety.

Ripple retained Shampanier "to evaluate the Expert Report of ██ ██ one of the SEC's experts. (Shampanier Report (Ex. 42) ¶ 7.) ██ opines that a hypothetical, reasonable XRP purchaser would have had an expectation of profit derived from Ripple's efforts and that there are certain elements in XRP's design (among other things) that would appeal more to a purchaser interested in making a profit than to a financial institution seeking to use XRP as an asset that bridges a cross-border exchange of one fiat currency to another.[30] ██ opines about the *perspective* of a reasonable XRP purchaser on Ripple's statements, actions, and product offerings. Shampanier's purported rebuttal focuses on a theory not present in ██ opinions—the *causal relationship* between Ripple's statements, actions, and offerings on the one hand, and a decision to buy XRP on the other.

Shampanier opines that ██ does not offer a reliable methodology to evaluate such a causal relationship, for example, by conducting an experimental survey or other methods for evaluating a causal proposition. Although ██ is not required to conduct any surveys in order to

---

[30] On the topic of Ripple's cross-border payments, Shampanier stated that she is not offering any opinion with respect to "the history of XRP or Ripple or ODL."

evaluate the perspective of a reasonable purchaser of XRP—his knowledge, skill, and experience are sufficient, notwithstanding Shampanier's criticism of his qualifications—Shampanier's rebuttal opinions regarding causation should be excluded because they do not rebut, contradict, or counter any subject matters in ███ report and are beyond the scope of ███ opinions. Moreover, Shampanier is unqualified to rebut ███ regarding the perspective of a reasonable purchaser of XRP, and her report contains impermissible speculations about what ███ believed or implied.

A.   Shampanier's Background and Purported Rebuttal Opinions

1. Shampanier's Background

Shampanier is a Senior Vice President at an economic consulting firm. She has a Ph.D. in Business and Management from the MIT Sloan School of Management, a Master's degree in Mathematics from Moscow State University and a Master's degree in Economics from the New Economic School (Moscow). (Shampanier Report ¶ 1.) Shampanier has no academic training in the area of digital assets and has never published any material in this area. (Shampanier Tr. (Ex. 43) 54:11-13; 54:17-19; 77:6-9.) She has never (i) independently conducted any marketing work in the area of digital assets, (ii) taught a course regarding digital assets, (iii) conducted any experiments regarding digital assets, or (iv) conducted any surveys regarding digital assets. (Id. at 54:20-25; 55:1-6.) Her areas of expertise include experimental design, survey design, consumer behavior, judgment, and decision-making, but she has never designed a survey about any digital asset (id. 73:1-18) and her surveys and experiments have primarily focused on determining cause and effect (id. at 78:17-25; 80:8-15; 81:10-18; 87:21-25; 92:14-93:3).

2. ███ Background and Opinions

███ has extensive experience in assisting government agencies with investigating possible securities violations and financial fraud in the digital assets space. (███ Report ¶ 3.) He has provided expert consulting related to digital assets, including examining documents and

representations related to initial coin offerings; providing detailed analysis of blockchain data such as flows of funds; smart contract activity; on-blockchain trading data; and decentralized finance platforms. (*Id.*) In addition, ▇▇▇ is the ▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇ ▇▇▇▇▇▇ and is intimately familiar "with many different participants in the digital asset space including retail users and traders, institutional investors, cryptocurrency miners, software developers, entrepreneurs, and venture capital investors." (*Id.* ¶ 4.) ▇▇▇ also has firsthand experience with using blockchains, trading platforms, software platforms, and institutional products; experience in digital asset investments; and ▇▇▇ of experience evaluating and investing in companies, public equities, commodities, real estate, bonds, currencies, and derivatives of those asset classes. (*Id.*)

▇▇▇ expert report concerns the perspective of a hypothetical, reasonable market participant. Specifically, he opines that a reasonable XRP purchaser would have had an expectation of future profit derived from the efforts of Ripple. (▇▇▇ Report ¶ 8.) His opinions concerning the perspective of a reasonable purchaser of XRP focus on three main topics: (1) features of XRP economics and suitability as a bridge asset, (2) XRP sales and escrow mechanics, and (3) Ripple's communications and promotional statements. (*Id.* ¶¶ 23-87.) On the features of XRP suitability and features as a bridge asset, ▇▇▇ opined that "[t]he correlation between the success of the platform and price of the coin" is "fantastic for investment-oriented purchasers of XRP, but not for the purchasers who are exclusively interested in the utility use of the cross-border payment product." (*Id.* ¶ 31.) On the topic of XRP sales and escrow mechanics, ▇▇▇ opined that "[t]he manner and mechanism of Ripple's ongoing sales, distribution, escrow, and buybacks of XRP would have been extremely important to a potential investment-oriented purchaser" and not to a purchaser concerned with the utility of XRP. (*Id.* ¶¶ 48-49.) With regard to Ripple's communications and promotional statements, ▇▇▇ opined that Ripple generated significant interest in purchasing XRP based on extensive public statements on its public website, social media platforms, finance and digital asset

news sites, and investor forums. (*Id.* ¶¶ 50-52.) He also opined that Ripple's public statements on investor-oriented forums suggest that Ripple targeted its communications to potential purchasers who were considering purchasing XRP as an investment. (*Id.*)

In his deposition, ██████ explained that his methodology in support of his opinions concerning the perspective of a reasonable purchaser of XRP entailed identifying key factors that are important to reasonable purchasers of digital assets based upon his experience in the digital asset space from trading, arbitrage strategies, and the discretionary trading strategies in various types of capital markets. It also included applying his experience interacting with market participants and his experience with digital assets and blockchains. ██████ then collected relevant data—including public statements by Ripple and its employees, blockchain data, and trading data—and using his knowledge and experience, he synthesized this information to determine how Ripple's statements and communications related to those key factors and how those factors and that data were relevant to a reasonable purchaser. (██████ Tr. (Ex. 44) 138:25-140:18; 199:2-5; 213:5-8; 214:7-11; 217:8-23; 218:3-25; 221:4-6; 222:3-224:20; 225:10-19; 233:9-236:9; 250:1-251:4.)

3. Shampanier's Purported Rebuttal Opinions

Shampanier claims that ██████ does not employ any reliable methodology in support of his opinions. (Shampanier Report ¶ 9.) Specifically, she opines that (1) ██████ provides no scientific basis for his *causal conclusions* regarding the effect of Ripple's statements, actions, and product offerings on particular purchase of XRP and does not conduct an experiment or any other quantitative empirical analysis; (2) ██████ does not evaluate whether and to what degree XRP purchasers were exposed to Ripple's statements; (3) ██████ analysis does not allow him to separate the supposed impact of Ripple's conduct on a purchaser's decisions from other potential influences; (4) ██████ does not explain how he selected Ripple's statements that he reviews and analyzes; and

(5) █████ does not offer any market segmentation to establish the different types of XRP purchasers he identifies. (*Id.* ¶¶ 9a-e.)[31]

Shampanier devotes a considerable amount of her report to the applicable methodology for evaluating causal propositions and the experiments that are used for this purpose. (*Id.* ¶¶ 18-26; Shampanier Tr. 147:12-149:4, 175:4-177:7, 180:12-181:11.)[32] She opines that █████ did not use a reliable methodology—such as an experiment, the so-called "gold standard"—that would allow him to make conclusions about causation. (Shampanier Report ¶ 16; Shampanier Tr. 150:4-151:23.) But she concedes that there are "[o]ther, nonexperimental options also available to evaluate perceptions and expected behavior" and that "[t]here are indirect ways of measuring perception." (Shampanier Tr. 151:17-23; 152:17-21.) Furthermore, she concedes that experts have evaluated perception without experimental data such as surveys and that she has even supported experts who have evaluated the perception of a hypothetical consumer without conducting any scientific analysis. (*Id.* at 152:17-153:5; 153:18-154:5; 154:13-155:4; 208:18-209:15.) Finally, she concedes that causation and expectation "mean different things," (*id.* at 142:1-4; 146:2-8) and that the word "cause" does not appear in █████ description of his assignment. (*Id.* at 186:23-187:16.)

On █████ particular opinions concerning the perspective of a reasonable XRP purchaser, including █████ evaluation of features of XRP economics, its suitability as a bridge asset, XRP sales, and XRP escrow mechanics, Shampanier opines that the statements attributable to Ripple that █████ highlights in those sections do not test whether the perspective of the purchasers were affected by these statements and do not analyze whether purchasers were exposed to these

---

[31] Shampanier also criticizes █████ qualification to render the opinions in his report. (Shampanier Tr. 196:11-197:13.) She opines that he does not appear to have any training to design and perform a "well designed experimental survey to assess causation." (Shampanier Report ¶ 9f.)

[32] Appendix C to Shampanier's rebuttal report purports to identify causal propositions in █████ report that Shampanier opines are unsupported by methodology. (Shampanier Tr. 158:15-159:2; 159:18-160:24; 160:25-161:9; 161:10-16; 161:17-23; 161:24; 162:15; 173:21-174:17.)

statements. (*Id.* at 202:2-205:12.) Another criticism she offers is that ███ only evaluates two types of perspectives and that he does not "offer any empirical evidence that would support the existence of these two types of purchasers or that those are the only two types of purchasers." (*Id.* at 194:8-195:1; 202:2-205:12.) Similarly, Shampanier claims that ███ does not evaluate the causal proposition between Ripple's statements and the perception of a reasonable XRP purchaser with any reliable methodology. (*Id.* at 206:16-208:17.)

Finally, Shampanier purported to opine as to what ███ *implied* with his opinions. In her deposition, for example, she stated that "there appears to be an implication … based on the totality of his report." (*Id.* at 146:9-18.) And, as to the section of ███ report titled "Ripple Platform Overview," she observed that "he implies the public cause and perspective of the actions of Ripple." (*Id.* at 112:12-114:9.) When asked to specify her claimed implications in a section of ███ report she replied: "I don't see anything explicit, but if Mr. ███ implies something, then he has no support for such implications." (*Id.* at 113:3-21.) She also opines about what ███ implies on other subject matters in his report, including ODL and Ripple's statements, actions and product offerings. (*Id.* at 115:12-116:9; 118:15-119:18; 125:10-24; 129:8-25; 138:1-141:11.) Finally, Shampanier opines about ███ beliefs regarding the effect of a statement by Ripple's CEO, Bradley Garlinghouse, in an interview with Bloomberg Technology, on potential purchasers of XRP. (Shampanier Report at 17 n.39; Shampanier Tr. 174:18-24.)

B.   The Court Should Exclude Shampanier's Purported Rebuttal Testimony.

1.   Shampanier's Purported Rebuttal Fails to Address the Subject of ███ Opinions.

The scope of a rebuttal is limited to the same subject matter encompassed in the opposing party's expert report. *See* Argument Section IV.B.2 *supra* (citing authorities). "[A] rebuttal expert report is not the proper place for presenting new legal arguments, unless presenting those arguments

is substantially justified and causes no prejudice." *Zimmer*, 2021 WL 1405185, at *3 (internal

quotation marks and citation omitted).

Shampanier's rebuttal is based on a false premise: that ███ was asked to evaluate a *causal*

relationship between Ripple's statement, actions, and product offering and particular purchases of

XRP by a reasonable purchaser. He was not. ███ was asked to render opinions on the *perspective*

of a reasonable investor based on Ripple's statements, actions, and product offerings. Shampanier's

rebuttal addresses an entirely different subject matter—"causal relationships" between a Ripple

statement and a purchase of XRP. Research on causal relationships pertains to analyzing cause and

effect including: "predictions about the consequences of changing circumstances or policies; it tells

us what would happen in alternative (or 'counterfactual') worlds. For example…the causal effect of

schooling on wages." Joshua D. Angrist and Jörn-Steffen Pischke, "*Mostly harmless econometrics: An*

empiricist's companion," Princeton University Press, at 3 (1st ed. 2008) (Ex. 45).

In Appendix C of her report, Shampanier provides a list of ███ opinions which

Shampanier claims constitute causal relationships, but ███ is not claiming that an investor

purchased XRP because of Ripple's statements (and the SEC need not prove such causal

relationship to prevail under *Howey*). Instead, ███ is opining on investor perspectives as formed

by Ripple's statements and actions, and by economic reality. For example, Shampanier writes that

the following statement by ███ is a causal relationship: "Purchasers would have expected or

hoped to profit by later re-selling their XRP at a higher price on a secondary market." (Shampanier

Report Appendix C.) There is no opinion about cause-and-effect relationship here, but rather a

perspective that exists—that purchasers could profit by re-selling XRP at a higher price—based on

economic reality, and Ripple's statements and actions. *Telegram*, 448 F. Supp. 3d 352. Indeed,

Shampanier concedes that causation and expectation "mean different things" and that a perspective

is not analogous to causation. (Shampanier Tr. 142:6-8.) Thus, Shampanier's opinions do not

contradict, repel or rebut evidence on the same subject matter addressed in ▮▮▮ report. Rather,
Shampanier's rebuttal opinion is essentially proffering a new theory that is improper for a rebuttal
report. This type of rebuttal testimony—that has nothing to do with the subject matter of the
original report—is inappropriate and should be excluded. *See, e.g.*, *McBeth*, 2018 WL 5997918, at *7;
see also AmTrust, 2020 WL 5578675, at *17-19; *Liddle*, 2009 WL 4907201, at *4-5.

2. Shampanier's Purported Rebuttal Includes Improper Speculation.

Shampanier's purported rebuttal opinions also speculate as to what ▮▮▮ implied in
support of his opinions regarding ODL and Ripple's statements, actions and product offerings
Shampanier Tr. 115:12-116:9; 118:15-119:18; 125:10-24; 129:8-25; 138:1-141:11.) Shampanier's
opinions regarding what ▮▮▮ implied or believed should be excluded as impermissibly
speculative. *See, e.g., Scentsational Techs.*, 2018 WL 1889763, at *3 ("[P]roffered expert testimony
should be excluded if it is speculative or conjectural.") (citation omitted); *In re Rezulin Prods. Liability
Litig.*, 309 F. Supp. 2d at 547 ("Inferences about the intent or motive of parties or others lie outside
the bounds of expert testimony.").

3. Shampanier Is Unqualified to Rebut ▮▮▮ Opinions.

As discussed in more detail in Argument Section III.B.3, to determine whether an expert is
qualified, "courts compare the area in which the witness has superior knowledge, education,
experience, or skill with the subject matter of the proffered testimony." *Tin Yat Chin*, 371 F.3d at
40; *Fin. Guar.*, 2020 WL 4251229, at *2. While ▮▮▮ opinions are based on his extensive
experience and knowledge of the digital asset space, Shampanier has no academic training in the area
of digital assets and has never published any material regarding digital assets. Moreover, Shampanier
has never independently conducted any marketing work in the area of digital assets, has never taught
a course regarding digital assets, and has never conducted any experiments or any surveys regarding
digital assets. In contrast to ▮▮▮ she has never been cited by a court on the subject matter of

digital assets, including the perspective of a reasonable purchaser of a digital asset. Thus,

Shampanier lacks the relevant qualifications to rebut █████ opinions on this subject matter.

CONCLUSION

For the foregoing reasons, the Court should exclude the testimony of Defendants' proffered

expert witnesses as set forth above.

Dated: New York, New York
       July 12, 2022

                /s/ Pascale Guerrier
                Pascale Guerrier
                Ladan F. Stewart
                Mark R. Sylvester
                Jorge G. Tenreiro
                Daphna A. Waxman
                Attorneys for Plaintiff
                SECURITIES AND EXCHANGE
                COMMISSION
                New York Regional Office
                100 Pearl Street, Suite 20-100
                New York, NY 10004
                (212) 336-5473 (Guerrier)
                guerrierp@sec.gov

                Benjamin J. Hanauer
                Robert M. Moye
                Attorneys for Plaintiff
                SECURITIES AND EXCHANGE
                COMMISSION
                175 W. Jackson Boulevard, Suite 1450
                Chicago, IL 60604

Appendix A

Comparison of Adriaens Report Text and Source Text

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 26	Contracts are (of course) among the defining structures in our economic, legal, and political systems. They protect assets and set organizational boundaries and responsibilities; they establish and verify identities and chronicle events; they govern interactions among nations, organizations, communities, and individuals; and they guide managerial and social action. But in certain respects, contracts and the bureaucracies formed to manage them have not kept up with the economy's digital transformation.	*Contracts*, transactions, and the records of them *are among the defining structures in our economic, legal, and political systems. They protect assets and set organizational boundaries. They establish and verify identities and chronicle events. They govern interactions among nations, organizations, communities, and individuals. They guide managerial and social action.* And yet these critical tools *and the bureaucracies formed to manage them have not kept up with the economy's digital transformation.*	https://hbr.org/20 17/01/the-truth-about-blockchain
¶ 27	A blockchain is an open, distributed ledger that can record transactions between two parties efficiently, and in a verifiable and permanent manner….	The technology at the heart of bitcoin and other virtual currencies, *blockchain is an open, distributed ledger that can record transactions between two parties efficiently and in a verifiable and permanent* way.	https://hbr.org/20 17/01/the-truth-about-blockchain

---

[1] The source text that is identical (other than tense, conjugation, and punctuation) to the Adriaens Report is italicized.
[2] All websites cited herein last accessed July 10, 2022.

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 27	In particular, contracts are embedded in digital code and stored in transparent, shared databases, where they are cryptographically protected from deletion, tampering, and revision. Every agreement, every process, every task, and every payment has a digital record and signature (identification or ID) that can be identified, validated, stored, and shared. Ideally, blockchains enable individuals, organizations, machines, and algorithms to freely transact and interact with one another with limited friction.	With blockchain, we can imagine a world in which *contracts are embedded in digital code and stored in transparent, shared databases, where they are protected from deletion, tampering, and revision.* In this world *every agreement, every process, every task, and every payment would have a digital record and signature that could be identified, validated, stored, and shared.* Intermediaries like lawyers, brokers, and bankers might no longer be necessary. *Individuals, organizations, machines, and algorithms* would *freely transact and interact with one another with little friction.*	https://hbr.org/2017/01/the-truth-about-blockchain

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 27	(1) Distributed (Decentralized) Database. This means that each party on a blockchain has access to the entire database and its complete history. No single party controls the data or the information. Every party can verify the records of its transaction partners directly, without an intermediary. (2) Peer-to-Peer. Communication occurs directly between peers who plan to engage in a transaction, instead of through a central node. Each node stores and forwards information to all other nodes. (3) Transparency and Anonymity. Every transaction and its associated quantity of cryptocurrency are visible to anyone with access to the system. Each node, or user, on a blockchain has a unique alphanumeric address that identifies it. This unique address key is pseudonymous. Users can choose to remain anonymous or provide proof of their identity to others. Transactions occur between blockchain addresses. … (4) Irreversibility of Records. Once a transaction is entered in the database and the accounts are updated, the records cannot be altered, because they are linked to every	1. Distributed Database *Each party on a blockchain has access to the entire database and its complete history. No single party controls the data or the information. Every party can verify the records of its transaction partners directly, without an intermediary.* 2. Peer-to-Peer *Transmission* *Communication occurs directly between peers instead of through a central node. Each node stores and forwards information to all other nodes.* 3. Transparency *with Pseudonymity* *Every transaction and its associated value are visible to anyone with access to the system. Each node, or user, on a blockchain has a unique 30-plus-character alphanumeric address that identifies it. Users can choose to remain anonymous or provide proof of their identity to others. Transactions occur between blockchain addresses.* 4. Irreversibility of Records *Once a transaction is entered in the database and the accounts are updated, the records cannot be altered, because they're linked to every transaction record that came before them (hence the term "chain"). Various computational algorithms and approaches are deployed to ensure that the recording on the database is permanent, chronologically ordered, and available to all others on the* network. 5. Computational Logic *The digital nature of the ledger means that blockchain*	https://hbr.org/2017/03/how-blockchain-applications-will-move-beyond-finance.

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
	transaction record that came before them (hence the term "chain"). Various computational algorithms and approaches are deployed to ensure that the recording on the database is permanent, chronologically ordered, and available to all others with access to the ledger. (5) Computational Logic. The digital nature of the ledgers means that blockchain transactions can be tied to computational logic and therefore can be programmed. This allows for businesses and other organizations to set up algorithms and rules that automatically trigger transactions between nodes (users of the blockchain).	*transactions can be tied to computational logic and in essence programmed. So users can set up algorithms and rules that automatically trigger transactions between nodes.*	

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 28	A digital wallet is a software-based system that stores users' payment information and passwords for numerous payment methods and websites. By using a digital wallet, users can complete purchases easily and quickly, and keep track of their blockchain-based transactions.	*A digital wallet* (or e-wallet) *is a software-based system that* securely *stores users' payment information and passwords for numerous payment methods and websites. By using a digital wallet, users can complete purchases easily and quickly* with near-field communications technology.	https://www.invest opedia.com/terms/ d/digital-wallet.asp#:~:text= A%20digital%20wa llet%20(or%20e,nu merous%20paymen t%20methods%20a nd%20websites.&te xt=Digital%20wall ets%20can%20be% 20used,for%20purc hases%20with%20t heir%20smartphon es.
¶ 28	Though there are plenty of wallet programs and hardware to choose from, they generally fall under two main types: hot and cold wallets. They vary in levels of security, accessibility, and other features. A hot wallet can also be called a software wallet because it is connected to a web server, and it initiates cryptocurrency transactions via browser-based webpages	*Though there are plenty of wallet programs and hardware to choose from, they generally fall under two main types: hot and cold wallets. They vary in levels of security, accessibility, and other features....* *A hot wallet can also be called a software wallet.*	https://time.com/ nextadvisor/investi ng/cryptocurrency /hot-wallet-vs-cold-wallet/

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 28	Its key role is to sign and authorize financial transactions digitally between the owner and end-users.	Instead, *its key role is to sign and authorize financial transactions digitally.*	https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/hot-wallet/
¶ 28	A collection of private keys stored on a program connected to the internet is used to store and send different currencies.	*A collection of private keys stored on a program connected to the internet is used to store and send different currencies such as Bitcoin.*	https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/hot-wallet/
¶ 28	A cold wallet, on the other hand, is a hardware wallet or cold storage, a physical device that keeps the generation and storage of cryptocurrency completely offline.[3] Many look like USB drives.	*A cold wallet,* otherwise known as *a hardware wallet or cold storage,* is *a physical device that keeps* your *cryptocurrency completely offline. Many look like USB drives.*	https://time.com/nextadvisor/investing/cryptocurrency/hot-wallet-vs-cold-wallet/
¶ 28	Given the security trade-offs when using either type of crypto wallet, a combination of cold and hot wallets is usually ideal.	*Given the trade-offs when using either type of crypto wallet, a combination of cold and hot wallets is usually ideal.*	https://www.gemini.com/cryptopedia/crypto-wallets-hot-cold#section-

---

[3] Footnote omitted.

A-6

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
			best-of-both-wallet-worlds
¶ 29	Digital wallets can be used in conjunction with mobile payment systems, which allow customers to pay for purchases with their smartphones.	*Digital wallets can be used in conjunction with mobile payment systems, which allow customers to pay for purchases with their smartphones.*	https://fuelmade.com/blogs/news/why-you-need-a-digital-wallet-for-your-store#:~:text=Digital%20wallets%20can%20be%20used,Apple%20Pay%20and%20Amazon%20Pay
¶ 32	Blockchain technology enables (among other things) a novel medium of exchange known as cryptocurrency.	*Blockchain is the technology that enables the existence of cryptocurrency (among other things).*	https://www.pwc.com/us/en/industries/financial-services/fintech/bitcoin-blockchain-cryptocurrency.html
¶ 36	As Bitcoin increased in popularity and the idea of decentralized and encrypted currencies caught on, the first alternative cryptocurrencies	*As Bitcoin increases in popularity and the idea of decentralized and encrypted currencies catch on, the first alternative cryptocurrencies appear. These are*	https://mirror.xyz/0x11EA14854518B6B64C7c6af7B2389

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
	appeared. Sometimes known as "altcoins," these cryptocurrencies generally tried to improve on the original Bitcoin design by offering greater speed, anonymity, or other advantages (such as energy requirements for validation).	sometimes *known as altcoin* and *generally try to improve on the original Bitcoin design by offering greater speed, anonymity* or some *other advantage.*	fAC49F338c0/APa A1Pmz0V5krDJX AfJW18MB84XD xLELHDxxYLB7E g
¶ 38	By solving computational math problems, Bitcoin miners make the bitcoin payment network more trustworthy and secure by verifying its transaction information.	*By solving computational math problems, bitcoin miners* also *make the* cryptocurrency's *network trustworthy by verifying its transaction information.*	https://www.invest opedia.com/terms/ b/bitcoin-mining.asp
¶ 38	By design, the reward halves after 210,000 new blocks, or about every four years ….	*By design,* the number of bitcoins minted per block is reduced by 50% *after every 210,000 blocks, or about once every four years.*	https://www.invest opedia.com/tech/ what-happens-bitcoin-after-21-million-mined/#citation-9
¶ 38	Ether follows the same principles as bitcoin in that its rewards and distribution are regulated on a yearly basis.	*Ether follows the same principles as bitcoin in that its rewards and distribution are regulated on a yearly basis.*	https://www.invest opedia.com/news/ why-ethereum-cofounder-proposing-hard-cap/#:~:text=Ethe r%20follows%20th e%20same%20prin ciples.cryptocurren

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
			cy's%20developers%20wrote%20in%202014.
¶ 39	In other words, the production of just one bitcoin consumes as much energy as 18 American or more than 1,500 Nigerian citizens per year.	*In other words, the production of just one bitcoin consumes as much energy as 18 Americans or more than 1,500 Nigerians per year.*	https://www.cgdev.org/blog/bitcoin-mining-bad-world-limited-options-addressing-problem
¶ 42	The Dex contains "autobridging" technology, which automatically connects order books using XRP as an intermediary when it reduces costs.	*Autobrid[g]ing automatically connects order books using XRP as an intermediary when it reduces costs.*	https://xrpl.org/decentralized-exchange.html#:~:text=Autobriding%20automatically%20connects%20order%20books,intermediary%20when%20it%20reduces%20costs.&text=Issuers%20can%20set%20custom%20tick,miniscule%20differences%20in%20exchange%20rates.

A-9

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 43	In blockchain, decentralization refers to the transfer of control and decision-making from a centralized entity (individual, organization, or group thereof) to a distributed network. Decentralized networks strive to reduce the level of trust (and thus dependence) that participants must place in each other and deter their ability to exert authority or control over one another in ways that degrade the functionality of the network.	*In blockchain, decentralization refers to the transfer of control and decision-making from a centralized entity (individual, organization, or group thereof) to a distributed network. Decentralized networks strive to reduce the level of trust that participants must place in one another, and deter their ability to exert authority or control over one another in ways that degrade the functionality of the network.*	https://aws.amazon.com/blockchain/decentralization-in-blockchain/
¶ 44	Since there is no central authority present to validate and verify the transactions, and every transaction in a blockchain is considered completely secured and verified, consensus protocols are a core part of any blockchain network.	*There is no central authority present to validate and verify the transactions, yet every transaction in the Blockchain is considered to be completely secured and verified. This is possible only because of the presence of the consensus protocol which is a core part of any Blockchain network.*	https://www.geeksforgeeks.org/consensus-algorithms-in-blockchain/
¶ 44	A consensus mechanism is a fault-tolerant mechanism that is used in computer and blockchain systems to achieve an agreement on a single data value or a single state of the network among distributed processes or multi-agent systems, such as cryptocurrencies.	*A consensus mechanism is a fault-tolerant mechanism that is used in computer and blockchain systems to achieve the necessary agreement on a single data value or a single state of the network among distributed processes or multi-agent systems, such as with cryptocurrencies.*	https://www.investopedia.com/terms/c/consensus-mechanism-cryptocurrency.asp

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 44	In this way, consensus algorithms achieve reliability in the network and establish trust between unknown peers (i.e. distributed validation) in a distributed computing environment. Essentially, the consensus protocol makes sure that every new block that is added to the blockchain is the one and only version of the truth that is agreed upon by all the nodes in the blockchain.	*In this way, consensus algorithms achieve reliability* in the Blockchain *network and establish trust between unknown peers in a distributed computing environment. Essentially, the consensus protocol makes sure that every new block that is added to the Blockchain is the one and only version of the truth that is agreed upon by all the nodes in the Blockchain.*	https://www.geeks forgeeks.org/conse nsus-algorithms-in-blockchain/
¶ 44	While there are different consensus algorithms based on specific objectives such as coming to an agreement, collaboration, co-operation, equal rights to every node, and mandatory participation of each node in the consensus process, they all aim at finding a common agreement that is a win for the entire network.	The Blockchain consensus protocol consists of some *specific objectives such as coming to an agreement, collaboration, co-operation, equal rights to every node, and mandatory participation of each node in the consensus process.*	https://www.geeks forgeeks.org/conse nsus-algorithms-in-blockchain/
¶ 46	The XRP Ledger's consensus protocol breaks up the common notion of a shared set of validator nodes. Rather, it lets every node declare other nodes it subjectively trusts in a UNL. A validator respects only the opinions of nodes in its UNL for validating transactions.	The Ripple consensus protocol targets a middle ground between proof-of-work and BFT consensus by *breaking up the common,* global *notion of a shared set of validator nodes. It lets every node declare other nodes it subjectively trusts in a* so-called Unique Node List *(UNL). A validator respects only the opinions of nodes in its UNL for validating transactions.*	https://cryptobern. github.io/noconsen susripple/

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 47	In fact, a smaller subset of validators consistently is responsible for approval of transactions, and serves three functions: it connects to a network of peers, relays cryptographically signed transactions, and maintains a local copy of the complete shared global ledger. What makes an XRP Ledger validator different from other consensus validation protocols is that the validator also issues validation messages, which are sets of candidate transactions for evaluation by the XRP Ledger network during the consensus process.	A rippled server running in validator mode does everything a stock server does: *Connects to a network of peers* *Relays cryptographically signed transactions* *Maintains a local copy of the complete shared global ledger* *What makes a validator different is that it also issues validation messages, which are sets of candidate transactions for evaluation by the XRP Ledger network during the consensus process.*	https://xrpl.org/run-rippled-as-a-validator.html
¶ 48	The XRP Ledger can process 1,500 transactions per second with an average ledger settlement (approval time) of 3-5 seconds. This is in comparison to ether, which takes an average of 13 seconds, and bitcoin, which can take around 10 minutes. This speed makes XRP a practical currency for instant transactions in comparison to other leading cryptocurrencies.	*XRP can process 1500 transactions per second with an average ledger settlement (approval time) of 3-5 seconds. This is in comparison to Ether, which takes an average of 13 seconds, and Bitcoin, which can take around 10 minutes.* *This speed makes XRP a practical currency for instant transactions in comparison to other leading cryptocurrencies.*	https://www.plus500.com/en-SZ/Instruments/XRPUSD/Difference-Between-Ripple-XRP-Other-Cryptocurrencies~3

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 49	Safety means that nothing "bad" ever happens: the ledger does not fork and malicious participants cannot double-spend a token. Liveness means that something "good" happens over and over again, so that the network continues to process transactions and makes progress. Violating either property creates trouble for all participants in the network.	*Safety means that nothing "bad" ever happens: the ledger does not fork* or *and malicious participants cannot double-spend a token. Liveness means that something "good" happens over and over again, so that the network continues to process transactions and makes progress. Violating either property creates trouble for all participants in the network.*	https://cryptobern. github.io/noconsen susripple/#:~:text =Safety%20means %20that%20nothin g%20%E2%80%9 Cbad,process%20tr ansactions%20and %20makes%20pro gress.
¶ 49	However, what makes the XRP Ledger attractive from a speed and cost perspective also makes it potentially vulnerable if protocol conditions such as the need for synchronized clocks, timely message delivery, the presence of a fault-free network, and an a-priori agreement on common trusted nodes with the UNL are violated.	Our findings show that the Ripple protocol relies heavily on *synchronized clocks, timely message delivery, the presence of a fault-free network, and an a-priori agreement on common trusted nodes with the UNL* signed by Ripple.	https://cryptobern. github.io/noconsen susripple/
¶ 50	The concern is what is referred to as the "51% attack scenario," in which a single entity or organization is able to control the majority of the hash rate, potentially causing a network disruption (such as intentionally excluding or modifying the ordering of transactions).	A *51% attack* is a potential attack on a blockchain network, where *a single entity or organization is able to control the majority of the hash rate, potentially causing a network disruption.* In such a scenario, the attacker would have enough mining power to *intentionally exclude or modify the ordering of transactions.*	https://academy.bi nance.com/en/arti cles/what-is-a-51- percent-attack

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 52	Before a transaction's results are committed to the XRP Ledger, the invariant checker examines those changes for correctness. If the transaction's results break one of the XRP Ledger's strict execution rules, such as creating more XRP (a transaction should only destroy XRP), the invariant checker rejects the transaction.	*Before* the *transaction's results are committed to the ledger, the invariant checker examines those changes for correctness. If the transaction's results* would *break one of the XRP Ledger's strict rules, the invariant checker rejects the transaction.*	https://xrpl.org/invariant-checking.html
¶ 53	In theory, digital assets and cryptocurrencies were meant to avoid some of the environmental consequences of fiat currencies and their production.	*In theory, cryptocurrency is meant to avoid some of these environmental consequences because these are digital assets by design.*	https://ripple.com/insights/the-environmental-impact-cryptocurrency-mining-vs-consensus/
¶ 54	All XRP that ever will exist is already in existence; as a consequence (and unlike Bitcoin and Ethereum), no unsustainable mining practices or additional energy are ever required to produce more XRP.	*All XRP is already in existence, meaning no unsustainable mining practices or additional energy is ever required to produce more, unlike other digital assets like Bitcoin and Ethereum.*	https://ripple.com/insights/the-environmental-impact-cryptocurrency-mining-vs-consensus/

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 57	For cryptocurrencies to be useful and compete effectively with fiat currencies, platforms must have transaction speeds at least as fast as current systems such as Paypal, Venmo, and Visa. They must also be ready to further scale transaction speeds, and an increase in demand and users.	*For cryptocurrencies to be useful and compete effectively with fiat currencies, platforms must have transaction speeds at least as fast as current systems such as Paypal, Venmo, and Visa. They must also be ready to further scale transaction speeds,* and *demand and users increase.*	https://dataoverhaulers.com/good-cryptocurrency-characteristics/
¶ 61	Cryptocurrency exchanges, also known as "digital currency exchanges" or "crypto exchanges," are essentially businesses that allow customers to trade cryptocurrencies for other assets including conventional fiat money or different digital currencies.	*Cryptocurrency exchanges, also known as digital currency exchanges or cryptoexchanges, are essentially businesses that allow customers to trade cryptocurrencies or digital currencies for other assets including conventional fiat money or different digital currencies.*	https://www.nortonrosefulbright.com/en/knowledge/publications/e383ade6/cryptocurrency-exchanges-and-custody-providers-international-regulatory-developments
¶ 62	Some, like Coinbase, have been around since the early days of Bitcoin; others, like Robinhood and PayPal, are better-known for other services, and have only recently allowed customers to trade cryptocurrencies within their existing accounts.	*Some, like Coinbase, have been around since the early days of Bitcoin,* when there was far less oversight into how crypto was bought, sold, and traded. *Others, like Robinhood and PayPal, are better-known for other services, and have only recently allowed customers to trade crypto within their existing accounts.*	https://time.com/nextadvisor/investing/cryptocurrency/what-are-cryptocurrency-exchanges/

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 79	Blockchain technology – that is, the notion of Distributed/decentralized ledger technology has the potential to create new foundations for our economic and social systems.	*Blockchain* is a foundational *technology.* It *has the potential to create new foundations for our economic and social systems.*[4]	https://hbr.org/2017/01/the-truth-about-blockchain
¶ 81	An analogy to the adoption of the protocol that laid the groundwork for the development of the internet, known as TCP/IP (for transmission control protocol/internet protocol), illustrates the point. The TCP/IP protocol first gained traction in around 1983 for a single use (just like blockchain did with Bitcoin): as the basis for e-mail among the researchers on ARPAnet, the precursor to the commercial internet.	One of the most relevant examples is distributed computer networking technology, seen in the adoption of *TCP/IP (transmission control protocol/internet protocol),* which *laid the groundwork for the development of the internet.* Introduced in 1972, *TCP/IP first gained traction* in *a single-use* case: *as the basis for e-mail among the researchers on ARPAnet, the* U.S. Department of Defense *precursor to the commercial internet.*	https://hbr.org/2017/01/the-truth-about-blockchain
¶ 81	But a more fundamental feature of the TCP/IP protocol – that it permitted users to transmit information digitally by breaking it up into very small packets (each including address information) between nodes in a network – proved to allow for innumerable other, unforeseen commercial applications.	The new protocol *transmitted information by* digitizing it and *breaking it up into very small packets, each including address information.*	https://hbr.org/2017/01/the-truth-about-blockchain

---

[4] Emphasis in original omitted.

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
¶ 82	Once the basic infrastructure of the web gained critical mass, however, a new generation of tech companies took advantage of low-cost connectivity by creating internet services that were compelling substitutes for existing businesses.	*Once* this *basic infrastructure gained critical mass, a new generation of companies took advantage of low-cost connectivity by creating internet services that were compelling substitutes for existing businesses.*	https://hbr.org/2017/01/the-truth-about-blockchain
¶ 82	Ultimately, it took more than 30 years for TCP/IP to move through all the phases – from a single use case to broader disruptive business models leading substitution of existing businesses, to the transformation of how companies create and capture value – by which it reshaped the economy.	*Ultimately, it took more than 30 years for TCP/IP to move through all the phases—single use,* localized use, *substitution,* and *transformation—*and *reshape the economy.*	https://hbr.org/2017/01/the-truth-about-blockchain
¶ 119	This internet of value does not only pertain to the movement of money, but to enable the exchange of any asset that is of value to someone, including stocks, votes, frequent flyer points, securities, intellectual property, music, scientific discoveries, and more.	And it's not just money. *The Internet of Value* will *enable the exchange of any asset that is of value to someone, including stocks, votes, frequent flyer points, securities, intellectual property, music, scientific discoveries, and more.*	https://ripple.com/insights/the-internet-of-value-what-it-means-and-how-it-benefits-everyone/
¶ 120	ODL, formerly known as xRapid, is a liquidity solution for banks that uses XRP as a bridge currency to eliminate delays in global payments while also lowering their cost, thus	*XRapid is a liquidity solution for banks that uses Ripple's XRP as a bridge currency and is being* developed by the company Ripple.	https://cryptocurrencyfacts.com/xrapid-explained

Adriaens Report	Adriaens Report Text	Source Text[1]	Source[2]
	making cross-border payments instant and inexpensive.		
¶ 120	Traditional payment networks operate independently from each other. Sending value is easy only if the sender and recipient have accounts on the same network, but it can be slow and expensive if they have accounts on different networks. Interledger makes it easy to transact in whatever currency or payment network you choose, because it is not tied to any one company, blockchain, or currency. Using ILP, XRP can be sent to someone who wants to receive ether, or you can send U.S. Dollars to someone who wants to receive Euros.	*Traditional payment networks operate independently from each other. Sending value is easy only if the sender and recipient have accounts on the same network, but it can be slow and expensive if they have accounts on different networks. Interledger makes it easy to transact in whatever currency or payment network you choose, because* Interledger *is not tied to any one company, blockchain, or currency. Using* Interledger, you *can send XRP to someone who wants to receive* ETH, *or you can send* USD *to someone who wants to receive* EUR.	https://interledger.org/developer-tools/get-started/overview/

A-18